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ABSTRACT

An evaluation was conducted of the Instructional Technology Assistance Project. Its goals were to promote learning in technologically enhanced classrooms; support adult education (AE) teachers in developing skills and confidence in integrating technology into instruction; and identify exemplary practices in technology enhanced AE. Data sources included onsite visits; teacher interviews, attitude and satisfaction surveys, implementation project plans and results; workshop descriptions, attendance, and evaluation; and student computer skills surveys. Participants included 66 teachers from 6 sites and 7 AE programs. Teachers made 138 workshop appearances; 16 teachers completed classroom projects using technology. On a pre/post survey of 15 technology skills, teachers showed an average 24 percent gain. Thirteen workshops at various sites were evaluated for clarity of objectives, pace, relevance of activities, and meeting of participant needs. One site did a student pre/post computer skills assessment; 100 percent of students made significant gains. Of 36 goals set by sites, 32 were met, 2 partially met, and 2 were unmet. Teachers at several sites undertook projects to further integrate technology into their classrooms. Of 28 project goals proposed, 23 were met, 4 partially met, and 1 was unmet. A pre/post questionnaire showed teacher attitudes toward technology improved by an average 6.5 percent in 8 areas. (Sample instruments are appended.) (YLB)

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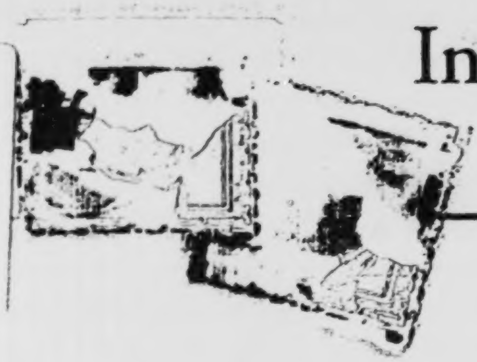

Instructional Technology Assistance Project

Evaluation Report: Year Two 2001-2002

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Technology is a part of life and everyone should know about it. However, in a broader sense technology can change our worldview, how we communicate and how we think. Moving to this stage is vital if technology is to truly serve instruction and learning.

The important thing about using technology in the classroom is how it transforms people's relationships to each other and to the world. We're not just talking about machines. The important thing about using technology in the classroom is not that computer skills are useful in the job market or that technology is a part of modern life and students need to know about it. The important thing about using technology in the classroom is that it has the potential to transform our relationships and the richness of our communications. It is a possible link between people, between ideas.

However, a teacher does not just wake up one morning and "decide" to transform his or her classroom. There are definable stages that teachers progress through as they develop their competence in instructional technology. For this reason, in the ITAP project we have attempted to develop a model and exemplary practices for supporting teachers at different stages of development.

It's important to have a model and a knowledge of best practices because they help us not be frustrated by slow process, nay-sayers, and resistance. When you have a model, you come to understand that there are natural stages or steps in the process and that resistance and setbacks are to be expected. Rather than getting discouraged when a group of new teachers just give up or generalize about how computers are "a waste of time," you can now understand that this is a typical early response and you can respond accordingly.

M.Thacher, 2002

Instructional Technology Agency Intervention Project Evaluation Report: Year Two 2001-2002

Executive Summary

The Instructional Technology Assistance Project is a project of the Outreach and Technical Assistance Network (OTAN), which is funded by the California Department of Education, Adult Education Office to provide statewide leadership to adult educators in the innovative use of technology to improve access to learners, collaboration among providers, and the quality of instruction. The contract objective for this initiative is:

> *"To implement the California Adult Education Technology Plan by developing and evaluating a model for identifying and disseminating best practices for using computer assisted instruction and Web-based instruction with adult learners"*

In general, the project consists of three goal areas:

- To promote learning in technologically enhanced classrooms
- To support adult education teachers in developing new skills and greater confidence in integrating technology into their instruction.
- To begin to identify exemplary practices in technology enhanced adult education

In the first two years, the project provided six California adult education programs with technical assistance, mentoring, staff development and other services to enhance student instruction via increased integration of technology into the classroom.

The end of the second year of the project, 2001-2002, marked the continuing emergence of models and exemplary practices for integration of technology into instruction. The third and fourth years of the project (2002-2004) will be "implementation stage years" wherein identified practices and models will be further defined and offered to selected sites interested in implementing these practices to meet the needs of their organizations. The third and fourth years are also seen as an opportunity for field-testing and further refining the models developed. The fifth year will include dissemination of the results to the rest of the field.

The model consists of a number of stages: selection of 6 model sites; administration of technology implementation surveys (needs assessment); selection of independent evaluator; goal setting with sites; gathering of instructor skills and other data; establishment and delivery of training, mentoring and other services; and post assessments. This report includes data collected from the first and second years of the project covering the following areas:

- **Participation** - 6 sites and 66 teachers participated in the project with 7 different adult education programs being represented. Participant teachers logged a total of 138 workshop appearances. 16 teachers completed classroom projects using technology.

- **Teacher Skills** - Teachers were surveyed on 15 different technology skills before and after the project. Using a Likert Scale from 1 to 4 ratings, participant teachers showed an average of a 24% gain in skills.

- **Workshops** – 13 different workshops were offered at various sites and evaluated for clarity of objectives, pace, relevance of activities and whether or not participant needs were met.

- **Intelligent Keyboard Project** – One site focused on the use of portable keyboards for beginning ESL writing instruction, with promising results based on pre and post writing samples as well as pre and post CASAS reading assessment compared to control groups. This project will be replicated at another site in year 3.

- **Student Computer Skills** – One site did a student pre and post computer skills assessment, on which 100% of students made significant gains, with the average gain being 17%.

- **Site Goal Implementation** - Each site in the project formulated goals at the beginning of their participation. The two continuing sites modified their goals for the second year. Of 36 goals set by the sites involved in the project, 32 were met, 2 were partially met and 2 were unmet.

- **Teacher Projects** - Teachers at several sites undertook projects with their classes to further integrate technology into their classrooms. Of the 28 project goals proposed, 23 were met, 4 partially met and 1 unmet.

- **Teacher Attitudes Towards Use of Technology** - Teacher attitudes were measured using a pre and post questionnaire. Overall attitudes towards technology improved by an average of 6.5 percent in 8 different areas of measurement.

- **Additional Results** - The project produced other useful products and information, including an ESL software resource list, student writing checklists and peer review checklists, on site access to action research data, establishment of Web site resources, and enhanced teacher skills in designing measurable objectives.

Examination of the project data and findings and interviews with project staff yielded a number of conclusions, lessons, and useful practices. These included developing the role of the on-site mentor; identification of methods of one-on-one coaching; approaching technology as a learning tool rather than as a separate subject; starting small; focusing on topical mentoring; the timing of hardware and infrastructure implementation; seeing technology planning as an on-going and evolving process; the involvement of teachers, technology support staff and administrators in planning; allowing for an opportunity for teachers to view and experience technology applications prior to doing a needs assessment; tailoring staff development to site needs; integration of relevant teacher classroom projects; addressing the specific issues of technology classroom management; on-going evaluation; and a model of the stages teachers go through in learning to use technology effectively with students.

PROJECT BACKGROUND

The Outreach and Technical Assistance Network (OTAN) is funded by the California Department of Education, Adult Education Office, to provide statewide leadership to adult educators in the innovative use of technology to improve access to learners, collaboration among providers, and the quality of instruction. Federal adult education and literacy funding supports the project, and the local fiscal agent is the Sacramento County Office of Education. During FY2000-2001 and 2001-2002, OTAN has conducted a research and implementation initiative. The contract objective for this initiative is:

> *"To implement the California Adult Education Technology Plan by developing and evaluating a model for identifying and disseminating best practices for using computer assisted instruction and Web-based instruction with adult learners"*

In general, the project consisted of three goal areas:

- To promote learning in technologically enhanced classrooms
- To support adult education teachers in developing both new skills and greater confidence in integrating technology into their instruction
- To begin to identify "best practices" in technology enhanced adult education

In the first year, the project consisted of identifying two California adult schools and providing these two sites, Vista Adult Education and Mt. Diablo Adult Education, with technical assistance to enhance student instruction via increased integration of technology into their programs. In order to provide services and skills that were truly applicable to each project site, an extensive needs and capacity assessment was undertaken in the initial stages of the project. Next, various forms of staff development, technical assistance, and other interventions were provided in the fall, winter, spring, and summer of 2000-2001 to meet the technological needs of each site. A variety of measures were used to study both the process of implementation and the impact of these interventions.

In the second year of the project, four new sites were added. These sites were Baldwin Park Adult and Community Education, San Diego Community College District Centers for Education and Technology, Jefferson Adult School, and the Stockton School for Adults. Technical assistance, mentoring, staff development and other services were offered to these four new sites. These services were again based on careful needs assessments and tailored to the unique needs of the sites involved. In addition, follow-up services and support were continued at both of the original first year sites (Mt. Diablo Adult Education and Vista Adult School).

The end of the second year of the project, 2001-2002, marked the continuing emergence of models and best practices for integration of technology into the adult school site. With these models more firmly in mind, the third and fourth years of the project (2002-2004) are currently conceived as "implementation stage years" wherein these identified best practices and models will be further defined and offered to selected sites interested in implementing these practices within the context of the needs of their organization. The third and fourth years are also seen as an opportunity for field-testing and further researching of the models developed. Based on the research of the first four years of the project, it is anticipated that the fifth year will include dissemination of the results and learnings to the rest of the field so that they may benefit from the lessons and models developed by the project. A multi-year overview of the Instructional Technology Assistance Program follows:

Instructional Technology Assistance Program: Multi-Year Overview

Location	00-01	01-02	02-03	03-04	04-05
Vista Adult	X	X	Follow up		Dissemination and Follow-Up
Mt. Diablo Adult	X	X	Follow up		
Baldwin Park Adult		X	X	Follow up	
Jefferson Adult		X	X	Follow up	
Stockton Adult		X	X	Follow up	
Santa Ana Coll. Cont. Ed.		Planning	Replication Study		
San Diego Comm. College		X	X		
Santa Cruz Adult			X	X	Follow-Up
Model Impl. School #2			X	X	Follow-Up

This report describes the interventions undertaken, examines the effects of these interventions, includes recommendations regarding similar integration of technology into other adult education programs, and discusses next steps for this project in the 2002-2003 academic year and beyond.

Action Research Model

The project used a unique continuous feedback or action research model to assess and provide services. This model, which evolved during the project, involved the continuous collection of agency needs data, the raising of awareness of technology options, provision of services and interventions, developing of on-site technology capacity, evaluation of the effects of interventions, and then further refining of interventions. This continuous feedback loop permitted consultation, staff development, and other services to be tailored and adjusted to on-going requirements and new issues that emerged as the project progressed. Early in the project it was discovered that gathering baseline data on levels of technology integration in instruction was not a difficult task. However, determining site and staff needs and selecting appropriate interventions best suited to the individual site was more complex. This distinction was due to the fact that teachers, administrators, and technical staff often were not aware of some of the possibilities and options for integrating technology into instruction. Without this knowledge of what the possibilities were, asking staff what they wanted did not make a great deal of sense. In short, it's difficult to respond to questions about which programs/interventions/resources might best impact student learning without being aware of the full range of possibilities.

Teacher projects are another example of the action research concept in this project. Early in the process at several sites, teachers identified classroom projects that they would undertake. Upon provision of staff development activities and further awareness of how technology fit their course objectives, these proposed projects often had to be modified or replaced with projects more suited to student needs, curriculum goals, or technological capabilities of the staff member or the site. Over time, staff begin to see technology, not as a separate thing to "do", but instead as a tool for reaching curricular objectives and enhancing student learning.

Project Staff

During the first year of the project a structured format of staffing was provided to each site. This consisted of the following team: a Site Facilitator, whose main role was to oversee and coordinate the interventions and services at that site; a mentor teacher who was to provide in-service training and classroom support to project teachers; and, a technical support person. During the second year of the project, staffing was modified so that different staffing structures supported different programs and site needs. Some programs identified a local mentor to work with the OTAN mentor. Some programs used more of a staff development model. OTAN contact/mentor staff for each site are listed below:

Site	ITAP Project Mentor	On-Site Project Leader
Baldwin Park	Marian Thacher	John Kerr
San Diego	Susan Gaer	Donna Price-Machado
Jefferson	Fernanda Carrera	Diana Rumney/Frank Lev
Stockton	Ruth Luman	Mary Briare
Mt. Diablo	Fernanda Carrera	Margaret Scott
Vista	Susan Gaer	Luann Gigante

In addition, OTAN staff provided overall project support in the following roles:

John Fleischman, general direction and technology planning
Linda West, overall project supervision, contracting and budgeting
Marian Thacher, project coordination
Suzanne Fletcher, data base design
Yolanda O'Shea, data base development
Paul Porter, independent evaluation

In order to facilitate communication among all of these staff, a Web site was developed (http://www.otan.dni.us/itap/). This Web site served as resource and data information link for both project and school site staff.

DATA SOURCES

Based on the learnings from the first year of the project, data sources were refined and stabilized during the second year. Teacher interviews, participant teacher computer skills inventories, site goals, teacher project plans and results, workshop evaluations, curriculum revision information, student computer skills gains, and other survey data provided varied data types for evaluation. In addition, a number of informal interviews and observations were used. In the second year of the project, a more accurate picture of each site's needs was formed early so that staff development, projects and other interventions and subsequent data could be tailored accordingly. An overview of each data source is outlined below:

Preliminary Surveys

Prior to an on-site visit to discuss needs and goals with each agency, a needs assessment was administered via a preliminary survey at several sites (Vista, Mt. Diablo, Stockton, and Baldwin Park). These surveys were designed to give the intervention team members a general feel for the current status of technology use in the participating programs and the agency perception of its own needs. The survey yielded the following types of information about each site:

- types of programs and number of teachers
- availability computers: teachers and students
- email status
- computer configuration
- estimated tech skill level of staff
- current technical support
- connectivity
- web hosting
- classroom equipment
- Internet information

The actual surveys administered can be found in the Appendix.

Initial On-Site Visits

Prior to the initiation of each site's project, an initial on-site visit was scheduled. These meetings included OTAN staff involved in the project, site administrators, some selected teachers and support staff.

The major goal of these initial site visits was to engage in a facilitated discussion aimed at developing goals and objectives for the Instructional Technology Assistance Project. OTAN staff clearly stated during these visits that the purpose of the project was to increase use of instructional technology in a manner that met site needs and made sense to the participants rather than imposing pre-designed interventions. The action research aspects of the project were also explained so that the participants were familiar with the general objectives regarding learning about exemplary practices and sharing these practices with the field at the conclusion of the study. A further outcome of these site visits was to develop goals and a preliminary intervention plan which identified the first steps in conducting in-services for staff. These goals can be found below.

Individual Teacher Interviews

OTAN staff scheduled individual interviews with site teachers and staff planning to participate in workshops and other services provided. These interviews, lasting approximately 15 minutes, had two purposes:

1) to gather further, more personalized data on staff technology needs

2) to build rapport between OTAN mentor teachers and site staff so that site staff would be more comfortable in sharing areas of needed learning and in asking for future on-site technical assistance as the project proceeded.

Interview questions included one-to-one discussions of current technology use, topics of interest, self-skills rating, and preferred methods of further learning. Actual interview questions follow:

Individual Teacher Interview Questions

1. What have you done with technology in your classroom to date?

2. Do you use any software currently? Which?

3. How would you like to be able to use technology in your instruction or preparation for instruction (dream a little)?

4. Based on the overview of possibilities workshop just given, are these any things you think you might be interested in using in your teaching?

5. Questions:
   - How would you rate yourself in terms of computer literacy? (1-10)
   - In what percentage of your lessons do you estimate you now use technology?
   - How confident are you with using technology in instruction? Rate yourself on a scale of 1-10 with 10 being "the most confident".

6. In thinking about classes and workshops to improve your technology skills in instruction, what is the best way you learn new information (e-mail, one to one, classes, etc.)?

7. Administer the Personal Computer Skills Survey

Aggregate Computer Skills Inventory

Participant teachers at each site were administered an extensive Aggregate Computer Skills Inventory. This inventory, developed by Steve Linberg and modified for this project, used participant teacher self-evaluations to measure personal computer skills in various areas of technology. These areas included:

- Computer Usage
- Software Basics
- Word Processing
- Creating Web Pages
- Downloading of Files
- Personal Targeted Skills
- Computer Integration Into Instruction
- General Troubleshooting
- Internet Connectivity
- Web Browser
- Ethical Use Issues
- Presentation Programs
- File Management
- E-Mail
- Graphics

The Computer Skills Inventory can be found in the Appendix.

Teacher Attitude and Satisfaction Surveys

Another measurement of project impact was gathered by surveying individual teacher to assess their attitude about technology before and after participation in the project. Teacher satisfaction with the project and the interventions and services was also assessed at certain sites via surveys given at the end of the project year. These instruments can be found in the Appendix.

Teacher Implementation Project Plans & Results

One of the chosen interventions at certain sites was to assist teachers with classroom-based projects which integrated technology into instruction. The initial project plans and degree of implementation of these projects was monitored and reported.

Workshop Descriptions, Attendance, and Evaluation Information

Staff development via workshops has been an on-going component of the project. Data is presented describing the workshops offered, along with workshop attendance and participant evaluation information.

Student Computer Skills Surveys

Some sites collected information on student computer skills changes over the course of the project year based on surveys.

Other Interview, Meeting, and Site Visitation Information

Other data is presented on more informal interviews, project meetings, and various site visitations over the course of the project year.

Summary of Project Evaluation Design

The Instructional Technology Assistance Project gathered data from a variety of sources which is summarized below.

Summary of Project Evaluation Design	
Source of Data	Variables Assessed
Preliminary Survey	Site technology capabilities
Initial On -Site Visits	Formulation of goals, objectives, and early intervention strategies
Aggregate Skills Inventory	Pre and post growth measure of technology skills of participating instructors
Teacher Interviews	To learn more about participant needs and skills and to build staff/participant rapport
Teacher Attitude & Satisfaction Surveys	Teacher satisfaction with project workshops, consultation provided, classroom projects, confidence, classroom effects of project, and other implementation assessments
Workshop Descriptions and Attendance	Teacher workshop overview and staff participation rates
Workshop Evaluation	Teacher assessment of workshop effectiveness
Teacher Project Plan and Descriptions	Initial goals of teacher projects and the degree of implementation
Student Computer Skills Survey	Gains in student computer skills

PROJECT IMPLEMENTATION STAGES

The Project consisted of a number of stages or steps. Many of these stages were carefully planned prior to the official start of the project. Other stages were added and modified as site and project staff learned about the needs of the participants and which approaches and strategies were most effective. A continuous feedback mechanism was used to facilitate the application of learnings throughout the implementation phases. Project implementation stages are outlined below.

1. Selection of Model Sites

Year One

Vista Adult Education & Mt. Diablo Adult Education

Two sites were chosen for the project for the first year. Vista Adult Education in Vista, California and Mt. Diablo Adult Education in Concord. These two sites were chosen to provide a northern and southern location and two sites with diverse populations that were not already experiencing an advanced degree of integration of technology into their adult education programs. Mt. Diablo Adult chose to focus on the High School Diploma Program and Vista Adult on its night ESL Program.

Year Two

Four additional sites were chosen for the second year of the project. These sites were:

Baldwin Park Adult and Community Education

An initial meeting was held November 11, 2001 between OTAN and Baldwin Park staff. Baldwin Park decided to focus on High School and Adult Basic Education. Vice-Principal John Kerr was the primary project contact. He provided project leadership through his own technical knowledge and enthusiasm about technology use in the classroom. A total of eight teachers participated. Three workshops were designed to respond to teacher needs. A successful practice used for one workshop on March 8th was to bring in teachers from Sweetwater Adult Education to present the topic "Student Technology-Based Projects in a High School Subjects Lab." A second workshop on March 22nd, "Using the Web Board with Students" showed teachers how to have students post their work on the Web board, and how to correct writing projects online. The final workshop offered April 19th and was entitled "Using iMovie and Digital Camcorders." A lead teacher at Baldwin Park left mid-year which created some continuity issues and also highlighted a trend noted in this project that an on-campus "cheerleader" is an important ingredient for successful technology integration. An important outcome of the project was the development of written Student Technology Outcomes (see appendix). 30 ABE students completed some or all of these outcome skills. Next year the checklist will be included in all high school student folders in order to facilitate the tracking of student progress.

San Diego Comm. Coll. District Centers for Education & Technology

An initial meeting was held with San Diego Community College on February 4, 2002 with the project in operation for the spring semester only. The primary focus for this site was to develop an on-site mentor to support technology integration in the ESL program. Susan Gaer from OTAN provided assistance to Donna Price-Machado who served as an on-site mentor with a 60% assignment. The project consisted of two parts. First. the on-site mentor worked with any teacher requesting her help in taking their ESL class to the lab and integrating instructional software and Internet activities into their curriculum. The second part was the ITAP Mentor training the on-site mentor in the mentoring process. The ITAP mentor provided this training by modeling the mentoring process with one selected teacher. Following this stage, the on-site mentor provided continuing support to teachers. The overall goal was to use technology to enhance teacher lessons and student learning. 11 teachers at three different sites were in the target group. A workshop was held on February 22nd on "ESL Lessons for the One Computer Classroom."

Jefferson Adult School

Jefferson Adult School is a smaller adult education school located in the Jefferson Union High School District in Daly City. The initial ITAP Planning Meeting was held on November 14, 2001. Their ITAP program focused on ESL instruction and integration of technology into ESL curriculum along with working on student improvement in computer skills. The program consisted of two parts. First, the OTAN mentor consulted with the lab teacher in developing on-line lessons that were integrated into the curriculum for all levels of ESL. All six of the on-site ESL teachers began bringing their classes to the lab once per week at the beginning of this project. Second, the ITAP Mentor worked with the six teachers individually on the technology project that each selected to implement in their classroom. These projects included: writing resumes, a keypal exchange with an adult ESL class outside of London, Web page design, PowerPoint presentations, songs and lyrics found and presented using the computer, and writing. The mentor at the Jefferson site spent a great deal of time working individually with each teacher in the project. She assisted them in formulating ideas, securing resources, providing support and encouragement, and, in one case, helping in the classroom during implementation of an email project.

Stockton School for Adults

The initial planning meeting was held with Stockton School for Adults on October 23, 2001. A decision was made to focus on the ESL Program. Many of the ESL teachers possessed a great deal of classroom teaching experience but had little exposure to technology. The site principal was very enthusiastic about the use of technology in the classroom and was anxious to help teachers move in that direction. Each classroom was already equipped with a computer and LCD projector.

An initial "Possibilities Workshop" was held to expose teachers to the myriad of possibilities for using computers in the classroom. Following the workshop, it was decided that the initial focus of the project would be on developing PowerPoint skills and using PowerPoint for classroom presentations. By the end of the year, almost every teacher had developed their skills significantly and begun using the computer as a classroom presentation tool. The final workshop at Stockton Adult introduced Internet lessons for ESL at a variety of levels. It is anticipated that for next year there will be further focus on Internet use for students.

Year 2 Continuation

The original two sites selected in 2000-2001 continued into the 2001-2002 year. Goals and interventions for these sites continued to be refined to accommodate their needs and goals as they progressed into their second year in the project.

Vista Adult School

For the second year of their project Vista Adult School focused on ESL staff development and further implementation of their wireless portable word processing program. Based on the first year success with the Intelligent Keyboard project, Vista purchased 30 more portable word processing keyboards for use in CBET and ABE classes. In addition, each of the 4 teachers who was mentored in 00-01 worked with another teacher to introduce them to the use of the intelligent keyboards with their students. One product outcome was a list of classroom activities using the keyboard. Vista also opened a new Adult Education building that was fully wired for technology. Vista Adult made a decision to leave the ITAP Project in November, 2001.

Mt. Diablo Adult Education

For the second year of their project, Mt. Diablo focused on infusing technology into the curriculum of 6 more High School courses and subsequently using this revised curriculum in the classroom. Curriculum was revised in the following courses: Algebra, Biology, Government, History, and Technology (see Appendix for curriculum samples). New computers and computer furniture were purchased and placed in several high school classrooms. In addition, 4 Student Technology Assistants were chosen to tutor other students and assist teachers. The ITAP Mentor continued to work individually with 5 teachers in the project on topics they selected such as Internet searching and Web page development. In addition, workshops were offered on Basic Computer Troubleshooting and Internet Search Techniques.

2. Agency Technology Implementation Surveys

Following the selection of the project sites, surveys were administered to determine the current state of technology implementation, equipment, and other resources at each site. These surveys provided data as to connectivity, training provided, hardware available, software, maintenance functions and other baseline information needed in planning future steps.

3. Selection of Independent Evaluator

An independent evaluator, Dr. Paul Porter, was selected to assist with research design and to evaluate the project. The project evaluator was part of the goal formation process, design of data gathering methods, and the writing of the final report.

4. Agency Goal Setting Process

Early meetings and discussions with each school produced preliminary goals. Following this, a formal goal setting meeting was held at each site. Meetings involved OTAN project staff, key administrators and support staff at each site. It was understood that the goals set for the project could be modified as the needs of the sites and the participants became clearer. The goals that were formulated for each site were:

First Year Site Goals (2000-2001)

Project Goals 2000-01: Vista Adult School

1. **ESL staff will increase their comfort with and skill in applying technology in the classroom**
2. **The evening use of ESL lab will increase**
3. **Lab use will incorporate classroom teacher instructional objectives**
4. **Students will increase their competency in using technology**
5. **Increased infusion or use of technology will result in a positive impact on student learning**
6. **A model for staff development process will be developed which can be used by Vista as part of a technology plan in the future or by other districts in adopting a "best practices" for staff development**

Project Goals 2000-2001: Mt Diablo Adult School

1. **Identify and allocate existing and needed resources (including space) necessary to accomplish instructional technology project goals.**
2. **Increase staff awareness and knowledge of potential application for adult learning**
3. **Expand and integrate use of technology in the Adult Secondary curriculum in a manner which increases student learning.**
4. **Increase computer literacy levels for adult secondary learners**
5. **Increase staff skills, confidence, and competencies of staff in using technology in instruction.**

Second Year Site Goals

Project Goals 2001-2002: Baldwin Park Adult Education

1. **By 12/01, the HS/ABE Program will establish a list of technology skills that completing HS and GED students should have demonstrated.**
   Evidence: A written list of skills

2. **By 6/02, 30 students in ABE will be exposed to at least 9 skills from the listing of ABE/HSS Technology Outcomes identified by the program**

   Evidence: tracking checklist will be developed by the program for the purpose of measuring progress on these skills for the students involved.

3. **By 6/02, each appropriate selected ABE/HSS Technology Outcome will be reviewed and assigned to a HS course.**

   Evidence of these assigned outcomes will be via course outlines. Some of these outcome skills may be piloted in the assigned courses during the 01-02 year.

4. **Beginning in 6/02 several HS instructors will teach and evaluate the Technology skills as part of their instruction..**

   Evidence will be via teacher lesson plans and/or teacher reports, and student completion of courses with integrated technology skills.

5. **By 6/02 staff development will be offered for instructional staff on shared document editing.**

   Evidence will be via staff development agendas and workshop evaluations.
   Other staff development and workshops as identified by Baldwin Park may be considered.

6. **By 2/02 a Web-based board will be established for students can post their assignments and develop an online portfolio.**

   Evidence will be actual print outs from the Web site.

Area/goal to explore:

An additional possible goal is to initiate a video project which offers "mini-lessons" of basic computer and technology skills. These videos would be available for on campus viewing or possible for check out.

Project Goals 2001-2002: San Diego Comm. College District

1. **By 6/02 At least 2 ESL teachers at each of the designated sites (West City, Centre City, ECC, and Lind Vista) will be bringing their class to the lab of a regular weekly basis, with students using software and/or doing activities that include Internet access.**

   Evidence:
   - a) Number of classes using the labs
   - b) Teacher initial and final interviews

2. **By 6/02 teachers using the ESL labs with their classes will increase their own computer skills in at least 2 areas.**

   Evidence:
   - a) Teacher skills self-assessment

3. **By 6/02 at least 2 teachers will use productivity software to do one classroom project with their students (support by OTAN workshop in advance)**

   Evidence:
   - a) completed projects
   - b) Teacher attitude survey
   - c) On-site mentor's reports of the mentoring process

4. **By 6/02 the site mentor will develop a process of training teachers to integrate technology into instruction.**
   Evidence:
   - a) written documentation of the process
   - b) evidence of class computer activities and projects completed
   - c) On-site mentor's reports

5. **By 6/02 the site mentor will learn how to use technology with 3 or 4 computers in a classroom of approximately 30 students and will be able to support teachers in this same process.**
   Evidence:
   - a) OTAN mentors observations
   - b) Participating teacher's reflections and reports

Project Goals 2001-2002: Jefferson Adult Division

1. **By 6/02 the six ESL staff members participating in the program will be exposed to a variety of instructional technology programs. Each staff member will select 1 to 2 programs to supplement their teaching ESL students language acquisition/proficiency skills.**
   Evidence:
   - a) staff development records relating to which programs reviewed
   - b) interviews and/or survey of staff to determine program(s) used

2. **By 6/02 at least 6 teachers will integrate selected technologies into the delivery of their ESL curriculum. Each teacher will develop at least one goal or project relating to technology use in his or her classroom** (examples: Internet research, writing program, on-line articles, pictures)
   Evidence
   - a) written teacher goals or projects
   - b) teacher interviews to determine the extend to which the project was implemented and teacher perceptions about usefulness

3. **By 6/02 ESL students participating in the project will show improvement in their basic computer skills.**
   Evidence:
   - a) teacher ratings of skill improvement for a sample of students
   - b) student survey of perceived change in skills or confidence with technology

4. **By 6/02 Jefferson Adult will further identify and define the role of a site mentor teacher to support staff in the integration of technology.**
   Evidence:
   - a) informal job description
   - b) interview with Jefferson staff

5. **By 6/02 6 ESL classes will be instructed in a setting using technology to improve their language acquisition at least ½ hour per week.**
   Evidence
   - a) Teacher records of instruction

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Project Goals 2001-2002: Stockton School for Adults

1. **By 6/2002 each teacher involved in the project will present at least one lesson using a computer and projector.**
   Evidence:
   a) Submission of lesson plan or classroom observations

2. **By 6/2002 teachers involved in the project will become familiar with possibilities of the use of technology in the classroom instruction, and increase their skills in 2 or more areas** (examples: PowerPoint, Word, Web-based research, email, etc.).
   Evidence:
   a) Teacher skills self-assessment

3. **By 1/2002 each project classroom will be provided with at least one computer for teacher use and one computer for student use**
   Evidence
   a) Equipment records

Project Goals 2001-2002: Vista Adult School

1. **Continue and expand use of intelligent keyboards in classes.**
   Evidence:
   a) records of class use of devises.

2. **Mentor three new teachers**
   Evidence
   a) data gathering via mentor notes

3. **Produce an activity booklet for adult ESL students**
   Evidence:
   a) submission of actual booklet.

Project Goals 2001-2002: Mt. Diablo Adult Education

1. **By 6/02 a student survey will be developed and administered to all students. This survey will be used to select several students to apply as student technology assistants.**
   Evidence:
   a) Job description, survey itself, records of selected applicants

2. **By 6/02 6 High School Curriculum will be revised to include the use of software, productivity tools, and Internet.**
   Evidence:
   a) Written curriculum

3. **By 6/02 teachers will be using revised curriculum and students will be using computers more often in the classroom.**
   Evidence:
   a) Teacher lesson plans.

4. **Up to 8 teachers will meet individually with the mentor to develop computer skills in areas of weaknesses they have identified.**
   Evidence:
   a) Mentor records

5. **By 6/02 teachers will participate in at least two workshops on technology topics**
   Evidence:
   a) Workshop registration records

5. Instructor Computer Skills Inventory

Project teachers at each site were administered a pre and post inventory to assess their level of technology skills. Teachers ranked themselves on a scale of 0 (no experience) to 4 (expert) on a variety of skills including computer usage, integration into instruction, software, troubleshooting, file management, and more (See Appendix for survey).

6. Establishing a Training Schedule

After initial meetings and examination of the results of the Instructor Computer Skills Inventory, some sites began a staff development training program. A significant amount of the staff development in the project happened via the mentoring process which is addressed in a subsequent section of this report.

◆ Possibilities Faire

Initial surveys and interviews indicated that while staff had a number of stated needs, many were not familiar with the array of possible ways to further integrate technology into their instruction. In order to further acquaint staff with these options, and to stimulate interest in the area of technology in instruction, a "Possibilities Faire" was scheduled at Vista. This was an overview, demonstration workshop where participants could look at new and exciting ways to use technology in their classrooms.

Workshops Offered:

- Computer Literacy and Internet Basics
- Choosing Instructional Software and Hardware Basics
- Integrating the Internet Into Instruction
- Using Email and Web Pages in Instruction
- Educational Software
- Web Authoring: Quia and The Study Place
- Tech Tips and Troubleshooting Computers
- Projects for Success
- Using the Web board and Online Correcting
- Using Digital Video in the Classroom
- Integrating Computers into ESL Instruction
- 5 Ways to Use Technology to Support Classroom Instruction
- PowerPoint Basics for the ESL Classroom
- Designing Internet-Based Activities for ESL Students

The schedule of workshops for each location follows:

Vista Workshops

Date	Workshop	Instructor
10/25/00	Possibility Faire	Susan Gaer
11/8/00	Choosing Instructional Software and Hardware Basics	Doris Ivy and Linda Swanson
11/30/00	Integrating the Internet Into Instruction	Doris Ivy and Linda Swanson
12/6/00	Using Email and Web Pages in Instruction	Susan Gaer

Mt. Diablo Workshops

Date	Workshop	Instructor
11/6/00	Computer Literacy and Internet Basics	Melinda Holt
11/16/00	Choosing Instructional Software and Hardware Basics	Doris Ivy and Linda Swanson
12/7/00	Integrating the Internet Into Instruction	Doris Ivy, Fernanda Carrera, and Melinda Holt
12/11/00	Using Email and Web Pages in Instruction	Fernanda Carrera and Melinda Holt
3/12/01	Educational Software	Doris Ivy and Melinda Holt
3/29/01	Web Authoring: Quia and The Study Place	Fernanda Carrera, and Melinda Holt
12/4/01	Tech Tips & Troubleshooting Computers	Marian Thacher, Fernanda Carrera, Melinda Holt
4/23/02	Using Google for Internet Research	Fernanda Carrera, Melinda Holt

Baldwin Park Workshops

Date	Workshop	Instructor
3/8/02	Projects for Success	Sandra Hodge, Breit Henson, Gloria Escalera
3/22/02	Using the Web Board and Online Correcting	John Kerr
4/19/02	Using Digital Video in the Classroom	John Kerr

San Diego CET Workshops

Date	Workshop	Instructor
2/25/02	Integrating Computers into ESL Instruction	Susan Gaer

Jefferson Workshops

Date	Workshop	Instructor
6/25/02	ESL Activities for the One-Computer Classroom	Marian Thacher

Stockton Workshops

Date	Workshop	Instructor
12/10/01	5 Ways to Use Technology to Support Classroom Instruction	Ruth Luman & Marian Thacher
2/26/02	PowerPoint Basics for the ESL Classroom	Ruth Luman
5/15/02	Designing Internet-Based Activities for ESL Students	Ruth Luman & Marian Thacher

7. Individual Teacher Interviews

The purpose of these interviews was to talk face to face with each teacher about how the project was proceeding to date, to hear more specifically how teachers were planning to use the skills, and to find out what additional support was needed.

8 Refining Site Goals of the Project

Some of the selected sites engaged in a mid-year refining of their goals. It was common that, after learning more about technology and how it could interface with their student learning goals, sites chose to modify their initial planning to better suit their needs, interests, and timeline.

One example of this mid-year refining of goals was in the first year of the project with Vista Adult. After the completion of most of their initial training, the school began to move ahead with the task of identifying teachers who wished to be mentored. Their initial plan was to develop Web sites for their classes and design Web-based instruction. There was almost no response from teachers to this offer to assist them with the designing of Web-based instruction. This prompted site administrators and project staff to try and determine why there was such a minimal response. Analysis via interviews and discussion indicated that teachers were just not yet ready for this step of designing Web-based instruction. A written response from a staff member in the project summed up some of the frustrations at this point:

> *"The simple truth is that we are not yet physically ready to introduce and implement into our ESL program the creation and maintenance of Web sites, Web based instruction, etc....teachers are not ready to go there. It is too big of a leap..." In interviewing teachers at this stage in the project: "they shared their disappointment in the project and many expressed utter confusion and frustration with regard to expectations and confidence in their ability to ever perform what may be expected of them...Start at the beginning...We now believe that introduction of technology into our ESL program will need to start at a simple and logical level." (2/4/01)*

An interim meeting and subsequent discussions proved to be extremely valuable in reformulating project goals and redirecting resources into much more specific, more focused and "doable" goals.

At Vista Adult, mid-year evaluation lead to the initiation of a portable keyboard project. A partnership was formed between AlphaSmart, Inc. (ASI) and the Outreach and Technical Assistance Network (OTAN), and the OTAN Instructional Technology Assistance Project (ITAP). The main purpose of this partnership was to provide a solution for affordable technology in the adult ESL environment to enhance instruction in the writing process for learners. The AlphaSmart 3000 (a keyboard size portable word processing devise) was used in this pilot program with four adult ESL classes at Vista Adult School, under the supervision of Susan Gaer, the mentor teacher assigned to Vista by OTAN. Students used the intelligent keyboard in the class to compose, edit, and download their writing exercises. Goals for this new project at Vista Adult were:

Initial Vista Portable Keyboard Project Goals

1. Four Adult Education ESL classes in the Vista Adult Education Program will be using the AlphaSmart Writing Program as a regular part of their curriculum
2. A pre and post writing assessment using a rubric scoring method will be given to a sample of students in each of the four classes. Results of the pre and post assessment in writing will show a significant increase in student writing skills
3. A survey will be given to students in all 4 classes to obtain their assessment of the helpfulness of the AlphaSmart program in their writing. A goal of 65% students is set for students rating AlphaSmart as helpful or very helpful on a Likert-type scale.
4. Teachers in each of the 4 classes will be surveyed to obtain their feedback on the use of the AlphaSmart Program. They will rate the use of the program on a number of different variables.

RESULTS/FINDINGS

Participation Summaries

The following charts depict degree of participation of teachers at the various sites in the project for 2000-01 and 2001-02. Activities vary from site to site depending on the identified needs of the programs and goals set by staff. In some cases other adult education staff not part of the study also attended workshops but are not listed.

<table>
<tr><td colspan="9">00-01 Mt. Diablo Target Group Participation</td></tr>
<tr><td>Number of teachers</td><td>Programs Represented</td><td># Phase I Inter-views</td><td># Pre Skills Assessm't</td><td># Post Skills Assessm't</td><td>% Workshop Attendance of total possible</td><td>% Sub. Wkshop Evals of total possible</td><td># Compl. Phase II Interviews</td><td># Imple-menting Projects</td></tr>
<tr><td>7</td><td>Adult Sec.
GED, HS Diploma,
GED/ABE</td><td>7/7</td><td>7/7</td><td>7/7</td><td>36/42</td><td>36/42</td><td>7/7</td><td>7/7</td></tr>
<tr><td colspan="9">01-02 Mt. Diablo Target Group Participation</td></tr>
<tr><td>6</td><td>Adult Sec., GED, HSS, IS, ABE</td><td>6/6</td><td>N/A</td><td>6/6</td><td>9/18</td><td>3/9</td><td>N/A</td><td>5/6</td></tr>
<tr><td colspan="9">00-01 Vista Adult School Target Group Participation-Initial Target Group (*7 teachers participated in Phase II of the project)</td></tr>
</table>

Number of teachers	Programs Represented	Self Assessment	Workshop Attendance	Workshop Evals	Alpha Smart Proj
15 (15)	ESL various levels (various)	12 /15	41/60	25/45	4

<table>
<tr><td colspan="9">01-02 Vista Adult School Target Group Participation</td></tr>
<tr><td colspan="9">Second year participation consisted further mentoring and implementation of intelligent keyboarding strategies.</td></tr>
<tr><td colspan="9">01-02 Baldwin Park Target Group Participation</td></tr>
<tr><td>Number of Teachers</td><td>Programs Represented</td><td>Interview</td><td>Pre-Skills Assessm't</td><td>Post Skills Assessm't</td><td>Attitude Survey</td><td>Workshop attendance</td><td>Workshop Evals</td><td>Imple-ment. Project</td></tr>
<tr><td>6</td><td>HSS, ABE GED, ESL</td><td>6</td><td>6</td><td>5</td><td>6</td><td>10/18</td><td>6/18</td><td>N/A</td></tr>
<tr><td colspan="9">01-02 San Diego Target Group Participation</td></tr>
<tr><td>12 (14)</td><td>ESL, TOEFL, CBET, ESL Citizenship</td><td>12</td><td>12</td><td>9/12</td><td>11/12</td><td>3/12</td><td>2/12</td><td>N/A</td></tr>
<tr><td colspan="9">01-02 Jefferson Target Group Participation</td></tr>
<tr><td>Number of Teachers</td><td>Programs Represented</td><td>Interview</td><td>Pre-Skills Assessm't</td><td>Post Skills Assessm't</td><td>Attitude Survey</td><td>Workshop attendance</td><td>Workshop Evals</td><td>Imple-ment. Project</td></tr>
<tr><td>7</td><td>ESL, ESL Citizenship</td><td>7/7</td><td>1/7</td><td>5/7</td><td>N/A</td><td>14/21</td><td>14/21</td><td>5/7</td></tr>
<tr><td colspan="9">01-02 Stockton Target Group Participation</td></tr>
<tr><td>9 (7)</td><td>ESL, ABE, GED</td><td>9/9 (5/7)</td><td>8/9</td><td>8/9</td><td>8/9</td><td>25/27 (8/21)</td><td>20/27 (3/21)</td><td>N/A</td></tr>
</table>

*workshop #1 not evaluated.

Mt. Diablo

Data indicates that in the first year of the project at Mt. Diablo 7 teachers participated in the target group with all 7 completing phase I interview, pre skills assessments, post skills assessments, Phase II interviews, and completing projects. 86% of possible workshops were attended and evaluation submitted. Six other staff members participated as members of the non-target group.

Vista

Vista Adult School had 15 teachers participate in the initial target group with four going on to be involved with the Intelligent Keyboard Project. 86% of these 15 teachers completed a self-assessment, 68% attended possible workshops with 56% turning in workshop evaluation. In the second year of the project four teachers mentored other teachers and the intelligent keyboard portion of the project was continued.

Baldwin Park

In 01-02 Baldwin Park had 6 teachers participate in the target group. Workshops had a 56% attendance rate.

San Diego

12 teachers participated in San Diego with a 91% workshop attendance rate.

Stockton

Stockton School for Adults had 9 participating teacher with a 93% attendance rate.

Computer Skills Inventory Change Data

An Aggregate Skills Inventory (see Appendix) was developed and administered in a pre and post test design to instructors participating in the project. The purpose of this instrument was to determine the net skills gain of the staff as a result of their participation in the project. The Inventory measured staff perception of their skills, allowing them to rate themselves on a five-point scale from no experience to expert. The inventory focused on the following areas:

- Computer Usage
- Computer Integration Into Instruction
- Software Basics
- General Troubleshooting
- File Management
- Word Processing
- Graphics
- Presentation Programs
- Web Pages
- Internet Connectivity
- E-mail
- Downloading Files
- Web Browser
- Ethical Use

Results of the Aggregate Skills Inventory follow.

Mt. Diablo Aggregate Skills Inventory Results, 00-01
n=7

By Skill Area											
Skills Area	**No Exper**		**Beginner**		**Novice**		**Independent**		**Expert**		**CHANGE**
	pre	post	pre	post	pre	post	pre	post	pre	post	
Computer Usage	0	0	0	0	3	2	4	5	0	0	**2.57 - 2.71**
Comp.Integration	0	0	3	1	1	0	3	6	0	0	**2.0 - 2.71**
Software Basics	0	0	2	1	3	3	1	1	1	2	**2.14 - 2.57**
Troubleshooting	0	0	2	0	1	4	4	3	0	0	**2.29 - 2.43**
File Management	0	0	3	2	2	1	2	4	0	0	**1.86 - 2.29**
Word Processing	0	0	0	0	5	1	1	5	1	1	**2.43 - 3.0**
Graphics	0	1	3	1	2	3	2	2	0	0	**1.86 - 3.00**
Presentation Prog	5	2	2	1	0	3	0	1	0	0	**.29 - 1.43**
Web Pages	5	1	2	2	0	3	0	1	0	0	**.29 - 1.57**
Internet Connect.	0	0	0	0	4	2	2	5	1	0	**2.57 - 2.71**
E-Mail	0	0	3	1	3	3	0	2	1	1	**1.86 - 2.43**
Download Files	3	1	2	1	2	4	0	1	0	0	**.86 - 1.71**
Web Browser	0	0	1	0	5	6	1	1	0	0	**2.00 - 2.14**
Ethical Use	0	0	2	0	1	1	3	5	1	1	**2.43 - 3.00**

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By Participant Teacher First Year			
Teacher #	**Pre Scores**	**Post Scores**	**% Change**
1	1.57	2.36	.79 (50%)
2	1.50	2.29	.79 (53%)
3	2.86	3.21	.35 (12%)
4	2.21	2.36	.15 (7%)
5	1.86	2.43	.57 (31%)
6	1.07	1.57	.50 (47%)
7	1.50	2.07	.57 (38%)
TOTAL	**1.79**	**2.33**	**.54 (34%)**

Based on this data Mt. Diablo participants showed gains in all five skill areas. The greatest improvement was noted in the Computer Integration area. Individual teachers gained an average of 33% in their skills.

01-02 Mt. Diablo Aggregate Skills Inventory Results

The following table summarizes the amount of change in participant teacher skills for Mr. Diablo teachers from the beginning of the project in the first year until the end of the project year two. The average amount of change in teacher skills ratings in the two years on the project was 84%.

Aggregate Skills Inventory
Mt. Diablo Adult School (by skill)
Compares Pre (Yr. 1) and Post Skills Survey (Yr. 2)

Skill	Pre-Skill Average (Yr. 1)	Post-Skill Average (Yr. 2)	% Change
Computer Usage	2.33	2.86	22%
Computer Integration into Instruction	1.67	2.71	63%
Software Basics	2.00	2.43	21%
General Troubleshooting	2.33	2.14	-8%
File Management	2.00	2.57	29%
Word Processing	2.33	2.43	4%
Graphics	2.00	2.14	7%
Presentation programs, e.g. PowerPoint	0.33	1.86	457%
Creating Web Pages	0.33	1.00	200%
Internet Connectivity	2.33	3.00	29%
E-Mail	1.67	2.86	71%
Download files	0.67	2.14	221%
Web browser, e.g. Netscape or IE	2.00	2.43	21%
Ethical Use of the Computer & Software	2.33	2.86	22%
Instructional Software	1.00	2.00	100%
Total Average Change			84%

00-01 Vista Aggregate Skills Inventory Results
n=12 pre and 4 post

By Skill Area										
Skills Area	**No Exper**		**Beginner**		**Novice**		**Independent**		**Expert**		**CHANGE**
	pre	post	pre	post	pre	post	pre	post	pre	post	
Computer Usage	0	0	0	0	3	1	9	3	0	0	**2.75 - 2.75**
Comp. Integrat	2	0	1	0	1	1	6	2	2	1	**2.42 - 3.00**
Software Basics	1	0	3	0	4	4	3	0	1	0	**2.00 -2.00**
Troubleshooting	1	0	1	1	6	1	4	2	0	0	**2.08 - 2.25**
File Management	1	0	2	1	3	1	5	2	1	0	**2.25 - 2.25**
Word Processing	0	0	1	0	7	1	3	3	1	0	**2.33 - 2.75**
Graphics	2	0	2	0	3	2	4	2	1	0	**2.00 - 2.50**
Presentation Pro.	3	0	1	1	1	2	6	1	1	0	**2.08 - 2.00**
Cr. Web Pages	8	1	1	1	1	0	1	2	1	0	**.83 - 1.75**
Internet Connect.	2	0	1	0	2	3	5	0	2	1	**2.33 - 2.50**
E-Mail	3	0	3	2	1	1	3	1	2	0	**1.83 - 1.75**
Download Files	5	0	2	1	1	3	1	0	3	0	**1.58 - 1.75**
Web Browser	5	0	2	0	0	3	5	1	0	0	**1.42 - 2.25**
Ethical Use	3	0	0	0	1	0	5	4	3	0	**2.42 - 3.00**

By Participant Teacher (part II of first year)			
Teacher #	**Pre Scores**	**Post Scores**	**% Change**
1	3.14	2.86	-.28
2	1.43	2.00	.57
3	1.43	1.93	.50
4	.43	2.50	2.07
TOTAL			**.71 (+137%)**

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01-02 Baldwin Park Aggregate Skills Inventory Results
n=5

By Skill Area

Skills Area	No Exper		Beginner		Novice		Independent		Expert		CHANGE
	pre	post	pre	post	pre	post	pre	post	pre	post	
Computer Usage	0	0	0	0	0	1	4	2	1	2	**3.20 - 3.20**
Comp Integration	0	0	0	0	0	1	4	2	1	2	**3.20 - 3.20**
Software Basics	0	0	0	1	2	1	3	1	0	2	**2.60 - 2.80**
Troubleshooting	0	0	0	1	1	0	3	2	1	2	**3.00 - 3.00**
File Management	0	0	1	1	0	0	3	2	1	2	**2.80 - 3.00**
Word Processing	0	0	0	0	1	1	4	3	0	1	**2.80 - 3.00**
Graphics	0	0	2	1	0	1	1	2	2	1	**2.60 - 2.60**
Presentation Pro.	0	1	1	1	1	3	2	0	1	0	**2.60 - 2.00**
Cr. Web Pages	2	3	0	0	2	1	1	1	0	0	**1.40 - 1.00**
Internet Connect.	0	0	1	0	0	2	4	2	0	1	**2.60 - 2.80**
E-Mail	0	0	0	0	2	2	3	1	0	2	**2.60 - 2.80**
Download Files	1	0	1	1	0	2	3	1	0	1	**2.00 - 2.40**
Web Browser	0	0	0	1	2	0	3	2	0	2	**2.60 - 3.00**
Ethical Use	0	0	0	0	0	1	3	1	2	3	**3.40 - 3.40**

By Participant Teacher

Teacher #	Pre Scores	Post Scores	% Change
1	2.79	3.50	26%
2	2.29	2.50	9%
3	3.36	3.64	9%
4	3.14	2.71	-14%
5	1.79	1.29	-28%
TOTAL			

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01-02 Stockton Aggregate Skills Inventory Results
n=8

By Skill Area											
Skills Area	**No Exper**		**Beginner**		**Novice**		**Independent**		**Expert**		**CHANGE**
	pre	post	pre	post	pre	post	pre	post	pre	post	
Computer Usage	0	0	2	0	4	3	2	5	0	0	**2.00 - 2.80**
Computer Integr	0	0	3	0	3	4	2	4	0	0	**1.88 - 2.40**
Software Basics	0	1	3	1	4	4	1	2	0	0	**1.75 - 2.00**
Troubleshooting	1	0	2	2	2	3	3	3	0	0	**1.88 - 2.30**
File Manag.	3	1	2	3	0	1	3	3	0	0	**1.38 - 1.90**
Word Processing	1	0	2	1	2	3	3	4	0	0	**1.88 - 2.60**
Graphics	2	0	2	2	3	4	1	2	0	0	**1.38 - 2.20**
Presentation Pro.	6	0	1	1	0	3	1	4	0	0	**.50 - 2.30**
Cr. Web Pages	7	5	1	2	0	1	0	0	0	0	**.13 -. 40**
Internet Connect	1	1	2	2	4	5	1	0	0	0	**1.63 - 1.70**
E-Mail	0	0	6	5	1	1	1	0	0	2	**1.38 - 1.80**
Download Files	2	1	3	2	3	4	0	1	0	0	**1.13 - 1.90**
Web Browser	4	2	1	3	2	1	1	2	0	0	**1.00 - 1.70**
Ethical Use	2	1	4	2	1	1	1	1	0	0	**1.13 - 2.20**

By Participant Teacher			
Teacher #	**Pre Scores**	**Post Scores**	**% Change**
1 1	.71	1.50	110%
2	.43	.93	117%
3	2.57	2.64	3%
4	1.29	2.07	61%
5	1.43	1.64	15%
6	1.86	2.36	27%
7	.50	1.43	186%
8	2.00	2.36	18%
Totals			**67%**

01-02 Jefferson Aggregate Skills Inventory Results:
insufficient data

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01-02 San Diego Aggregate Skills Inventory Results
n=11

By Skill Area

Skills Area	No Exper		Beginner		Novice		Independent		Expert		CHANGE
	pre	post	pre	post	pre	post	pre	post	pre	post	
Computer Usage	0	0	1	0	4	4	5	6	0	0	2.33 - 2.56
Computer Integr	0	0	1	1	4	0	4	9	1	0	2.44 - 3.00
Software Basics	0	0	2	2	7	6	0	2	1	0	2.00 - 2.00
Troubleshooting	0	0	3	1	3	5	4	4	0	0	2.00 - 2.44
File Manag.	0	1	4	1	4	4	2	4	0	0	1.78 - 2.11
Word Processing	0	0	1	0	5	6	3	3	1	1	2.44 - 2.56
Graphics	2	3	5	2	1	3	2	2	0	0	1.33 - 1.56
Presentation Pro	5	5	0	0	1	2	4	3	0	0	1.56 - 1.33
Cr. Web Pages	9	7	1	3	0	0	0	0	0	0	.11 - .33
Internet Connect	0	0	4	1	2	4	3	5	1	0	2.00 - 2.33
E-Mail	0	0	3	2	1	1	5	1	1	6	2.33 - 2.56
Download Files	3	3	1	0	6	4	0	3	0	0	1.22 - 1.56
Web Browser	2	1	1	1	5	4	2	4	0	0	1.67 - 2.11
Ethical Use	1	0	1	0	2	2	5	2	1	2	2.44 - 3.11

By Participant Teacher

Teacher #	Pre Scores	Post Scores	% Change
1	1.50	2.36	57%
2	2.93	2.93	0%
3	.71	1.50	110%
4	2.21	2.29	3%
5	1.07	1.14	7%
6	1.64	1.86	13%
7	1.71	2.36	38%
8	2.50	2.07	-17%
9	2.21	2.50	13%
Total			21%

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Aggregate Skills Inventory: Summary of All Sites

A summary of all sites indicates an average teacher improvement in computer skills of 24.3% between pre and post testing on the Skills Inventory. The table below summarizes these results.

Overall Aggregate Skills Inventory
(by skill)

Skill	Pre-Skill Average	Post-Skill Average	% Change
Computer Usage	2.47	2.73	11%
Computer Integration into Instruction	2.27	2.77	22%
Software Basics	2.10	2.17	3%
General Troubleshooting	2.27	2.30	1%
File Management	1.93	2.23	16%
Word Processing	2.37	2.53	7%
Graphics	1.67	1.90	14%
Presentation programs, e.g. PowerPoint	1.07	1.73	62%
Creating Web Pages	0.37	0.67	82%
Internet connectivity	2.20	2.30	5%
E-Mail	2.07	2.40	16%
Download files	1.27	1.83	45%
Web browser, e.g. Netscape or IE	1.77	2.17	23%
Ethical Use of the Computer & Software	2.30	2.77	20%
Instructional Software	1.59	2.17	37%
Total			24.3%

Workshop Evaluations

Each ITAP workshop was evaluated by means of a questionnaire given to all participants at the conclusion of the workshop. Participant responses were from 1 to 4 with 4 being the most favorable response. A summary of the participant evaluations of each workshop is presented below.

Workshop	Objective clear?	Activities helpful?	Well paced?	Met your needs?
	Vista Adult Target Group Responses			
Possibility Faire (00-01)				
Choosing Instruct. Software & Hardware Basics (00-01)	3.67	3.11	3.11	3.00
Integrating the Internet Into Instruction (00-01)	3.75	3.43	3.00	3.00
Using Email and Web Pages in Instruction (00-01)	3.50	3.25	2.75	2.86

Workshop	Objective clear?	Activities helpful?	Well paced?	Met your needs?
Mt Diablo Target Group Responses				
Computer Literacy and Internet Basics (00-01)	3.71	3.43	3.00	3.00
Choosing Instruct. Software & Hardware Basics (00-01)	3.43	3.29	3.00	2.67
Integrating the Internet into Instruction (00-01)	4.00	3.75	4.00	3.50
Using Email and Web Pages in Instruction (00-01)	3.86	3.86	3.71	3.67
Educational Software (00-01)	3.80	3.60	3.20	3.50
Web Authoring Quia and the Study Place (00-01)	3.67	3.50	3.50	3.20
Tech Tips and Trouble Shooting Computers (01-02)	4.00	4.00	3.80	3.60
Internet Searching with Google (01-02)	4.00	3.33	3.67	3.33
Baldwin Park Target Group Responses				
Projects for Success (01-02)	3.67	4.00	4.00	4.00
Using the Web Board and Online (01-02)	3.67	4.00	3.33	4.00
Using Digital Video in the Classroom (01-02)	Formal evaluation not done. Informal discussion only			
Stockton Target Group Responses				
5 Ways to Use Technology to Support Class Instr (01-02)	3.67	3.50	3.78	3.37
PowerPoint Basics for the ESL Classroom (01-02)	3.67	3.67	3.33	3.33
Designing Internet-Based Activities for ESL (01-02)	3.50	3.37	3.50	3.37
San Diego Target Group Responses				
Integrating Computers Into ESL Instruction (01-02)	4.00	3.50	3.50	3.50
Stockton Target Group Responses				
5 Ways to Use Technology to Support Class. Instruction	3.67	3.50	3.78	3.37
PowerPoint Basics for the ESL Classroom	3.67	3.67	3.33	3.33
Designing Internet-Based Activ. for ESL Students	3.50	3.37	3.50	3.37
TOTALS	**3.72**	**3.56**	**3.44**	**3.35**

Workshops were generally well received by participants with highest ratings being in the clarity of workshop objectives and helpfulness of activities. Pacing was rated at 3.44 on a 4-point scale and whether the workshop met participant needs was rated at 3.35 cumulatively. It is also noted that early in the project there was more variance in participant workshop ratings. Lower scores were seen in the first year of the project. This increase in workshop rating scores could be due to the more careful assessment of participant needs, tailoring of workshops to the needs assessment data, and the use of specifically site-based customized workshop designs for year two staff development activities.

Intelligent Keyboard Outcomes

During the second half of the first year of the project at Vista, staff undertook a project to use intelligent keyboards as a tool to increase student writing skills. Intelligent keyboards (AlphaSmarts) were used in 4 ESL classes at Pre-Literacy, Beginning 1 and Beginning 2 levels. The goals and degree of achievement follow:

1. Four Adult Education ESL classes in the Vista Adult Education Program will be using intelligent keyboards for writing as a regular part of their curriculum

    Degree of Attainment: Goal achieved. Four classes in Vista's ESL Adult Education program were provided with AlphaSmart and used AS throughout the term in each of their respective classrooms

2. A pre and post writing assessment using a rubric scoring method will be given to a sample of students in each of the four classes. Results of the pre and post assessment in writing will show a significant increase in student writing skills

    Degree of Attainment: A pre and post-edited writing sample was administered for each student in each of the four ESL classes. Student papers were scored using a standardized writing rubric which was consistent with State standards. Since students were learning English, a primary age rubric was used for both pre and post scoring. Scoring of the pre and post rubric for the students involved indicated a growth of 1.2 calibrated rubric levels on a six-point scale between the pre and posttest. It should be noted that writing samples were edited as opposed to "on-demand". Therefore the assessment measured the students ability to proof, edit, and refine their writing over time.

    In addition to meeting the above goal, students who received instruction in writing using the intelligent keyboards were compared with students receiving traditional writing instruction without the keyboards. CASAS pre and post mean test scores in listening and reading were compared for each class of Non-keyboard and one class of keyboard students. The gain of each group was then compared. Results showed a .92 difference in gain between the two groups.

3. A survey will be given to students in all 4 classes to obtain their assessment of the helpfulness of the AlphaSmart program in their writing. A goal of 65% students is set for students rating AlphaSmart as helpful or very helpful on a Likert-type scale.

    Degree of Attainment: A survey was given to all participating AlphaSmart students upon which they rated the degree to which the AlphaSmarts assisted with their learning to write. Students were also surveyed in other areas related to their class experience and use of intelligent keyboard technology. 83% of students surveyed stated that the AlphaSmart computer helped them to write better. 80% indicated that the intelligent keyboard made learning and writing easier. 92% said that learning was more fun or interesting using these keyboards.

4. Teachers in each of the four classes will be surveyed to obtain their feedback on the use of the AlphaSmart Program. They will rate the use of the program on a number of different variables.

    Degree of Attainment: All four participating teachers were surveyed to obtain their evaluation of the use of AlphaSmarts in the teaching of writing as well as other adjunct skills. Results showed that teachers' technology skills improved and that lessons were enhanced.

Writing Project: Teacher Classroom Goals

Each of the four participating teachers at Vista Adult School sought to improve the writing skills of their students in various levels of ESL. In conjunction with this overall goal, each instructor developed an individual goal or outcome for their class. Summarized goals were:

Writing Project: Teacher Classroom Goals

Teacher	Level	Teacher Goal of Outcome
#1	ESL Low Beginning	To create a biographical story for each session.
#2	ESL High Beginning	Create and use at least one AlphaSmart-based writing process lesson
#3	ESL Pre-Literacy	Create one biographical story for each session.
#4	ESL Citizenship	Write a Thanksgiving story

An unstated goal of all project teachers was also to increase student keyboarding skills. Teachers noted that these skills did increase during the project, but further benefit might have been shown if more direct teaching of keyboarding was undertaken in conjunction with the class.

Writing Project: Student Writing Sample Scoring

Students in the project participated in an edited writing sample submission. This is different than an "on-demand" writing sample in that with an edited writing sample students are allowed to continue to edit and improve upon their written product. In this study, the pre and post scoring of student writing actually indicates the growth in the ability of the student to read, use resources, and edit their written work over time and should be distinguished from increased ability to produced "on-demand" writing. In an on-demand writing sample students write within a time limit, typically responding to a given writing "prompt" and are not allowed to edit their work after it is submitted. In this project student pre and post edited writing samples were scored on a 6-point rubric.

Pre-test Average:	1.7
Post Test average:	2.9
Net rubric step gain:	1.2

This 1.2 rubric level change is a significant improvement and possibly reflects student increased ability to edit as well as increased confidence in writing and using the intelligent keyboard devices.

Writing Project: Student Survey

Another measurement of effectiveness of both the projects designed by the teachers and of the effectiveness of using AlphaSmart as a writing instruction and practice tool was the administration of student surveys. These surveys were administered at the conclusion of the term. Student survey results indicate a highly positive rating of the benefits of using the AlphaSmart in the classroom in learning writing skills. 85% of students indicated that they preferred the AlphaSmart to previous classroom methods in the teaching of writing. 92% evaluated AlphaSmart as making the learning of writing more interesting and fun.

VISTA ADULT SCHOOL
AGGREGATE STUDENT SURVEY
Total Number of Students Surveyed: 60

Survey Questions	Responses			Percentages		
	Yes	Maybe	No	Yes	Maybe	No
1. Using the Alpha Smart computer has helped me to write better:	49	10	1	83%	17%	0%
2. Using the Alpha Smart computer made learning and writing easier:	48	11	1	80%	20%	0%
3. Using the Alpha Smart computer made learning to write more fun or interesting:	55	5	0	92%	8%	0%
4. By using the Alpha Smart computer I am more confident with my computer/typing skills:	40	16	4	67%	27%	6%
5. I would prefer to use the Alpha Smart more than having a class without it:	51	8	1	85%	13%	2%
6. I would like to use the Alpha Smart computer in future classes:	56	4	0	93%	7%	0%

7. Please check the things that Alpha Smart has been helpful with (check as many as you like):

Spelling	30
Punctuation	20
Editing	20
Easy Sharing with other students	17
Making reading my papers easier	35
Learn new computer skills	39
Other (list)	7

8. Please list some good things about using the Alpha Smart computer in your class:

I learned to remember words; It helped me understand more (7x); I learned to type (3x); I learned to remember words (6x); I like the write takeng; I like the story to my friends; I learned to remember words. I learned to type; It helped me to writing more fast in the computer; I like to write sechteencus; I like to write seenteences; I like to write; I like spelling interesting; I like learn to write; made learning to write more fun ; I like the learn; Interesting whole It did fun and interesting; We learn how to write better (2x); We know how to use a computer better; We were happy all time; I like to use it; It was an interesting program to us because I learned to write better. It help me to use more the typing more easy; I am reading the sentences the all the picture, the computer; I like because help made learning; Is easy to use and amusing; I think the Alpha Smart is a good machine. It is good for me; I like to write (2x); I did like writing, read, spell, editing; help with spelling, editing, reading my papers easier; I like to use the computer for spelling; I like spelling; It's more fun.

9. Please list any negative things about using the Alpha Smart computer in your class:

nothing,(3x); I like everyday the computer; It was too little time;
It was to little time; I did not like when Alpha Smart erased by itself and I lost my work. (12x); I don't liked only one day of the week.; We used the Alpha Smart I am learning to write better. I like to use it; My Alpha Smart broke down and someone needed to repair it.
Maybe we need more time to use it; I am learn little with time the class.

Writing Project: Keyboard Use Analysis

Although the sample size of teachers using the AlphaSmart keyboards was limited, a number of consistent trends in both the formal and informal data regarding AlphaSmart use arose:

- Ease of Use

  Feedback from project teachers was favorable in terms of ease of use. Having at least one AlphaSmart for each two students made access to the devises easier. A general concern noted was the time it took to download student writing after each class session.

  AlphaSmart also provided unique opportunities for students to move from group to group with their written work, share information, and bring work to the teacher for correction and/or feedback. The general classroom mobility of the intelligent keyboards proved a great asset. A related benefit was the various classroom groupings that could be facilitated with the use of portable intelligent keyboards. These room arrangements included small group work, one on one tutoring, students assisting one and other, sharing work, etc.

- Assistance in Teaching the Writing Process

  All staff felt that the intelligent keyboards definitely were a great help in the writing process for students. It motivated students to take pride in their work, made editing easier, facilitated easier peer to peer interaction and cross correcting, and taught the students a valuable technology skill which they might use in other aspects of their school work and life. Some teachers noted that writing skills might have even further enhanced if additional instruction was provided to students on keyboarding skills. Another suggestion was that teachers receive more training in teaching the writing process in general.

Writing Project: Comparisons of Learning Gains

In order to compare students who received instruction in writing using the portable keyboards with students receiving traditional instruction without keyboards, scores of both of these groups of students were studied. CASAS first and last mean test scores in listening and reading were compared for one non-keyboard class and one class of students who used the keyboards. The gain of each group was then compared. A summary of these scores appears below:

COMPARISON OF LEARNING GAINS: KEYBOARD and NON KEYBOARD

ESL Level	CASAS Test	keyboard?	N (students with pre/post)	Mean Pre Test	Mean Post Test	Gain
Low Pre-Lit.	Listening	no	32	182.46	198.43	16
		yes	59	186.50	198.94	12.4
	Reading	no	56	188.26	195.96	7.96
		yes	91	189.43	199.72	10.3
High Preliteracy	Listening	no	38	193.94	195.23	1.28
		yes	26	191.38	197.88	6.5
	Reading	no	49	194.85	196.22	1.36
		yes	26	194.20	203.25	9.04
Low Beginning	Listening	no	44	199.31	199.63	.31
		yes	50	202.98	204.46	1.48
	Reading	no	68	199.52	203.01	3.48
		yes	48	200.93	205.70	4.77
High Beginning	Listening	no	31	206.48	209.54	3.06
		yes	25	202.04	206.72	4.68
	Reading	no	43	212.74	214.76	2.02
		yes	32	210.50	216.75	7.75
TOTALS			**718**	**197.22**	**202.88**	**No KB=4.43 Keybd=7.12**

The average CASAS testing gain by students in the four classes using traditional methods was 4.43 as measured by CASAS testing. The average gain for students in the four classes who used smart keyboards was 7.12. This represents a difference of 2.69.

Teacher Attitude and Satisfaction Surveys: 2000-2001

Vista

At the conclusion of the AlphaSmart project implementation, all four participating teachers were surveyed to determine their level of satisfaction with the use of AlphaSmarts in teaching ESL students to write more effectively. The survey used was a Likert-type scale (1 to 5) and, in addition, open ended questions were added to assess their perceptions of the project. Results follow:

00-01 Aggregate Teacher Satisfaction Survey: Vista Adult

Survey Question (summarized)	Results (scale of 1-5)
1. Workshops and presentations helpful	3.75
2. Using the information my classroom	4.74
3. Consultation helpful	5.0
4. Classroom project successful	4.12
5. My technology skills improved	4.5
6. Lessons enhanced	3.87
7. Confidence increased	5.0
8. Student learning increased	5.0
9. Planning further technology use	4.75
10. Want more staff development: inst. tech.	4.75
11. Next steps in your class	•do again and integrate more into curriculum •learn how to crop photos •use technology more •learn Internet and use it more
12. Best about project	•Support from Susan •Increased conversation practice of students •Pride of students in work •end product •students teaching each other •students learned to follow directions (big part of language skills) •Luann was helpful •Susan's printouts were very helpful •AS allow the giving of mini lessons to individual students •AS give student much more mobility in the classroom. This allows more grouping and classroom movement and variety

00-01 Aggregate Teacher Satisfaction Survey: Vista Adult

Survey Question (summarized)	Results (scale of 1-5)
13. Suggestions about further support	•better tech support is needed •need to have hardware in the beginning •better lap top •projects too rushed, start earlier •too much time transferring data to laptop for the teacher.(hours). Then problems retrieving •clearer instruction on student writing project •many students needed typing skills before •need an overhead or chart of AS keyboard (and power point) • 3 AS consistently didn't work. Need better repair procedure •Assign students each a file •do more on the writing process in conjunction •we're getting students excited about computers and now they won't have them at home. •too much time between student submittal of assignments and feedback •Need to further integrate the lab into the rest of the program

Almost all ratings were relatively high with the most positive results being increased confidence, consultation help, and student learning. Many very positive comments were also noted about the mentor teacher consultant available to them in demonstrating and assisting with lessons.

Teacher Survey results point to the use of on-site consultation as an important method for supporting technology use in the classroom. The relatively low workshop/presentation rating score may reflect the difficulty in meeting a variety of teacher needs in a large group workshop setting. Some of the highest ratings were around participant views of the helpfulness of on-site consultation to assist with real implementation problems and issues and also in the increase in their confidence levels in the area of using technology.

Mt Diablo

At the conclusion of the project, participating teachers were administered a survey to measure their reactions to the project itself and to collect information on their perceptions of the strengths and weaknesses of the various phases of the project. 7 teachers were surveyed from Mt. Diablo and their answers are summarized below. Ratings are on a 5 point Likert-type scale and averages for all participating teachers are displayed.

00-01 Aggregate Teacher Satisfaction Survey: Mt Diablo

Survey Question	Average
1 Professional Development Workshop	4.29
2. Using Information	3.86
3. Consultation helpful	4.28
4. Classroom Project successful	4.14
5. My technology skills improved	3.86

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00-01 Aggregate Teacher Satisfaction Survey: Mt Diablo	
6. Lessons enhanced	3.86
7. Confidence increased	4.07
8. Student learning increased	4.0
9. Planning further use	4.29
10. Like further staff development	4.29

Teacher survey results with Mt. Diablo were again relatively high. In this case there was less variation among rating categories than was seen at Vista. Follow up questioning also revealed that there was some confusion about the procedure for contacting the mentor teacher, and about her availability. Teachers indicated that a more regular schedule for the mentor teacher may have proven more helpful.

Teacher Attitude and Satisfaction Surveys: 2001-2002

For 2001-2002 teacher reactions concerning the use of technology were surveyed both pre and post (except Mt. Diablo) project intervention. The surveys were expanded to include questions to measure various aspects of teacher attitude towards technology and use of technology in classrooms. Results of each site are presented below followed by a summary of all sites.

Attitude Surveys by School

Baldwin Park

Survey Item	Pre-Attitude Survey (avg)	Post-Attitude Survey (avg)	% Change
Using technology in my classroom is not difficult for me.	7.86	6.00	-24%
There are many ways to use technology in my teaching.	8.86	8.00	-10%
I am confident in troubleshooting and minor computer repair.	6.71	5.00	-26%
Technology can be helpful in classroom record keeping and management.	7.57	5.00	-34%
I can foresee projects and situations where technology will help my students learn.	8.86	9.00	2%
Inservices and workshops would be helpful to me in developing my technology skills.	9.00	9.00	0%
One on one coaching would be helpful to me in developing my technology skills.	7.43	10.00	35%
I can develop successful lesson plans that include technology.	7.43	9.00	21%

Jefferson Adult School

Survey Item	Pre-Attitude Survey (avg)	Post-Attitude Survey (avg)	% Change
Using technology in my classroom is not difficult for me.	5.29	5.00	-6%
There are many ways to use technology in my teaching.	7.43	5.00	-33%
I am confident in troubleshooting and minor computer repair.	3.57	3.67	3%
Technology can be helpful in classroom record keeping and management.	5.71	6.17	8%
I can foresee projects and situations where technology will help my students learn.	7.57	7.33	-3%
Inservices and workshops would be helpful to me in developing my technology skills.	9.29	7.33	-21%
One on one coaching would be helpful to me in developing my technology skills.	9.43	7.33	-22%
I can develop successful lesson plans that include technology.	6.71	6.67	-1%

Mt. Diablo

Survey Item	Post-Attitude Survey (avg)
Using technology in my classroom is not difficult for me.	7.33
There are many ways to use technology in my teaching.	7.67
I am confident in troubleshooting and minor computer repair.	6.00
Technology can be helpful in classroom record keeping and management.	8.00
I can foresee projects and situations where technology will help my students learn.	9.33
Inservices and workshops would be helpful to me in developing my technology skills.	8.67
One on one coaching would be helpful to me in developing my technology skills.	6.67
I can develop successful lesson plans that include technology.	7.67

San Diego

Survey Item	Pre-Attitude Survey (avg)	Post-Attitude Survey (avg)	% Change
Using technology in my classroom is not difficult for me.	6.00	7.22	20%
There are many ways to use technology in my teaching.	7.73	8.78	14%
I am confident in troubleshooting and minor computer repair.	3.36	5.00	49%
Technology can be helpful in classroom record keeping and management.	7.36	8.78	19%
I can foresee projects and situations where	8.70	9.89	14%

Survey Item	Pre-Attitude Survey (avg)	Post-Attitude Survey (avg)	% Change
technology will help my students learn.			
Inservices and workshops would be helpful to me in developing my technology skills.	9.00	9.78	9%
One on one coaching would be helpful to me in developing my technology skills.	8.91	9.78	10%
I can develop successful lesson plans that include technology.	6.36	9.11	43%

Stockton

Survey Item	Pre-Attitude Survey (avg)	Post-Attitude Survey (avg)	% Change
Using technology in my classroom is not difficult for me.	5.44	6.90	27%
There are many ways to use technology in my teaching.	7.33	8.10	10%
I am confident in troubleshooting and minor computer repair.	5.44	5.90	8%
Technology can be helpful in classroom record keeping and management.	6.89	6.40	-7%
I can foresee projects and situations where technology will help my students learn.	8.56	8.40	-2%
Inservices and workshops would be helpful to me in developing my technology skills.	8.67	8.10	-7%
One on one coaching would be helpful to me in developing my technology skills.	9.33	8.80	-6%
I can develop successful lesson plans that include technology.	6.67	7.40	11%

Teacher Attitude Survey Results By Individual
(all Sites available)

Name	Pre Score	Post Score	% Change
1	7.33	6.78	-7.58%
2	7.67	8.44	10.14%
3	7.44	7.11	-4.48%
4	4.89	5.56	13.64%
5	6.00	6.78	12.96%
6	7.56	8.33	10.29%
7	5.00	8.22	64.44%
8	5.78	7.33	26.92%
9	4.78	7.00	46.51%
10	7.56	6.44	-14.71%
11	7.56	7.56	0.00%
12	8.00	5.00	-37.50%

Name	Pre Score	Post Score	% Change
13	5.00	3.89	-22.22%
14	4.89	5.78	18.18%
15	5.56	5.11	-8.00%
16	8.22	7.89	-4.05%
17	5.44	6.44	18.37%
18	8.00	8.11	1.39%
19	6.22	7.56	21.43%
20	5.33	5.56	4.17%
21	7.78	8.22	5.71%
22	4.44	5.33	20.00%
23	7.44	7.00	-5.97%
Total	**6.43**	**6.76**	**7.38%**

Overall Aggregate Attitude Survey

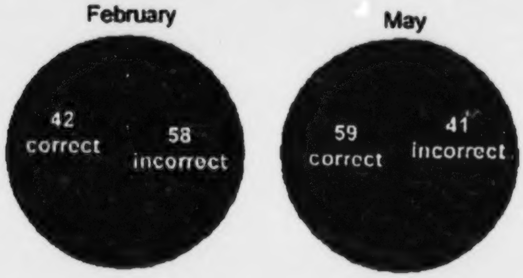
Survey Item	Pre-Attitude Survey (avg)	Post-Attitude Survey (avg)	% Change
Using technology in my classroom is not difficult for me.	5.75	6.46	12%
There are many ways to use technology in my teaching.	7.58	7.54	-1%
I am confident in troubleshooting and minor computer repair.	4.25	5.21	23%
Technology can be helpful in classroom record keeping and management.	6.58	7.04	7%
I can foresee projects and situations where technology will help my students learn.	8.33	8.63	4%
In-services and workshops would be helpful to me in developing my technology skills.	8.92	8.42	-6%
One on one coaching would be helpful to me in developing my technology skills.	9.13	8.75	-4%
I can develop successful lesson plans that include technology.	6.71	7.83	17%
Total			**6.5%**

An analysis of these results indicates that on key indicators teachers improved their outlook towards technology by an average of 6.5% The most significant gains came in troubleshooting confidence and in developing of lesson plans. Individual conversations with teachers indicated that the slight drop in desiring coaching and workshops may be because of increased overall confidence in ability to learn on their own.

Student Computer Skills Survey

One site, Jefferson Adult School, did a measurement of student computer skills. Of the 21 students randomly selected to assess from the five levels, 9 were retested at the end of the project in May to provide paired data. 100% of these nine students made significant gains in their skills, and the average gain was 17%. (The initial student survey is included in the appendix.)

Jefferson Student Computer Skills Results



Teacher Implementation Projects

At several sites teachers worked on specific curricular projects with their classes. The results of these projects are presented below.

Mt. Diablo: Year 1

The 7 teachers participating in the second phase of the Mt. Diablo Project each developed goals for the implementation of technology in their particular classroom. Details on the specific Implementation Projects can be found in the Appendix. A summary of the project goals are shown in the table below:

2000-01 Implementation Project Summary: Mt. Diablo

Project Title	Project Goal	Degree of Implementation	Notes
Life Science/ Biology on Quia	By 6/01, 4 students will take five tests or quizzes for biology and practice 3 reviews on Quia	Met	Instructor also rewrites the tests using simpler English but keeping content the same
Finding a Job Using CALJOBS Internet Site	By 6/01, 4 students will be able to turn on 8 computers, access the Internet and use specific search sites to input resume	Met (Internet) Met (use search) Met (input resume)	This project is part of the English curriculum for the district.

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2000-01 Implementation Project Summary: Mt. Diablo

Fine Arts- Art History	By 6/01 students will complete and submit an assignment using the Internet research an artist and 5 related artists. Also do site biblio.	Partially met (Internet research). Met (Site biblio)	Some students met goal others did not. Assignment may have been too complex
Non-violent Tactics Terminology	By 6/01 instructor will use an authoring Web site to develop a lesson in non-violent terminology	Partially met	Wrote lesson plan for the test. Couldn't yet get test to work on QUIA
Implementation of 25 Topical Lessons	For US History: By 6/01 student design and use US History test on line 15 students take the test and improve their computer skills Career Ed 4 students take the Holland on line and complete a Career Info. Sheet General Instructor developed and use at least 25 different lesson plans using Quia	Met (test on line) Partially Met (take test) Partially Met (Holland) Met (25 lessons)	Not as many tested as proposed.
On-Line Resume	By 6/01 4-6 students will produce an on-line resume Instructor will become familiar with at least 1 new Web site on resume writing skills	Met (resume) Met (Web site)	
ABE/Pre GED Computer Training	By 6/01 12 students will complete 6 lessons in Intro to Com.. Instructor will write a sample lesson plan of how to access Word. 70% of students completing all 6 lessons will pass a post test at the 80% level.	Met (6 students) Met (lesson plan) Not met (post test)	Teacher learned that pace was too fast

Data on teacher project goal fulfillment indicates that 11 goals were met, 4 were partially met, and 1 was not met. At least one goal was substantially modified after its identification.

Jefferson

2001-02 Implementation Project Summary: Jefferson

Project Title	Course	Goal	Degree of Implementation/Comments
Course Web page	Computers for ESL	Students become accustomed to accessing course resource on line.	Met. Created a class-use Web site. Will continue to use next year
PointPower Skills	Advanced ESL	Use PowerPoint in the classroom to model use for students	Met. Teacher created a presentation about himself as a model project. Students will do a PowerPoint presentation next semester.
Using E-mail for Communications	High Beginning ESL	Students will learn how to use email for communication	Met. Students did an email keypal project with students in England.
Create A Book	Literacy Level ESL	Publish literacy level student writing in book form	Met. Students wrote compositions with teacher corrections which were then spiral bound into a class book.
Post Resumes on Line	Inter. ESL	Students will use on-line resources to conduct job searches.	Met. Resumes written and placed on the Web.
On Line Lessons	All Levels	To promote use of the lab and create computer base lessons at all levels	Met. Created numerous Web based lessons coordinated with classroom curriculum for all 6 ESL classes (weekly).

Mt. Diablo: Year 2

2001-02 Implementation Project Summary: Mt. Diablo

Project Title	Project Goal	Degree of Implementation	Notes
Curriculum Revisions	A general goal was to revise curriculum and infuse technology in 6 different courses	Met	See Appendix for Projects

Review of Original Site Goals and Progress/Implementation

One of the major learnings of this project was an increased awareness of the value of keeping project goals flexible and revisable as teachers learned throughout the project what they really needed and desired in terms of technology support, projects, staff development, hardware, etc. Following are the goals and degree of implementation of each of these goals for each site for the first and second year of the project.

Mt Diablo Adult School
Original Project Goals and Updates as of August 2001

1. **Identify and allocate existing and needed resources (including space) necessary to accomplish instructional technology project goals.**

   Status: A list of needed resources has been developed. There has also been a marked increase in the use of technology at the school. There is still a need for a building or facility for more technology. Space remains an issue. In addition, a more formal written plan is need to supplement technology efforts.

2. **Increase staff awareness and knowledge of potential application for adult learning**

   Status: Staff awareness has definitely been increased. Plans are underway to continue to identify exemplary programs and share these among the staff.

3. **Expand and integrate use of technology in the Adult Secondary curriculum in a manner which increases student learning.**

   Status: Technology has definitely been increased on the site. Staff report that teachers still see technology as a bit more like "a project" rather than a vital part of curriculum and curricular implementation.

4. **Increase computer literacy levels for adult secondary learners**

   Status: The actual completion of student projects is evidence of this happening.

5. **Increase staff skills, confidence, and competencies of staff in using technology in instruction.**

   Status: Participant staff skills have increased. This is evidenced by informal comments and formal surveys of staff technological skills.

Vista Adult School
Project Goals for 2000-2001

1. **ESL Staff will increase their comfort and skill in applying technology in the classroom.**

   Status: Skill survey results, teacher survey results, and general consensus was that the teachers involved in the final project had significant gains in both their skills and comfort with using technology.

2. **Evening use of ESL Lab will increase**

   Status: Evening use of the ESL Lab did not increase. The initiation of the portable keyboard program created a kind of "mobile lab" environment where technology could be used in the classroom.

3. Lab use will incorporate classroom teacher instructional objectives

Status: Lab use did not change per se. Use of technology back in the classroom did increase significantly in the classrooms undertaking the final project.

4. Students will increase their competency in using technology

Status: As evidenced by student surveys, actual use of computers in project completion and in teacher observation, students involved in the final project increased their competency in the use of technology in the writing process.

5. Increased infusion or use of technology will have positive impact on student learning.

Status: Reading and listening benchmarks on CASAS testing indicated that students in the project showed gains in excess of a similar group of control group students not involved in the project and the use of smart keyboards.

6. Develop a model process for staff development which can be used by Vista as a part of a technology plan in the future or by other district in adopting a "best practices" for staff development.

Status: Through experimentation, constant reassessment of how the program was working, and program revisions, an "action research" model of staff development was developed which consisted of key elements such as: raising staff awareness of technological application prior to plan development, choosing a small group of staff to begin, providing both an on-site and outside consultant services, bringing resources into the classroom, providing assistance during the actual teaching process, etc. Plans are underway at Vista for increased staff development and technology integration in 2001-2002.

Baldwin Park Adult & Community Education
Project Goals for 2001-2002

1. **By 12/01, the HS/ABE Program will establish a list of technology skills that completing HS and GED students should have demonstrated.**
   Evidence of completion will be the list of skills
   Status: Met. A list has been developed (see Appendix).

2. **By 6/02, 30 students in ABE will be exposed to at least 9 skills from the listing of ABE/HSS Technology Outcomes identified by the program**
   Evidence : A tracking checklist will be developed by the program for the purpose of measuring progress on these skills for the students involved.
   Status: Met. Students were exposed to the skills.

3. **By 6/02, each appropriate selected ABE/HSS Technology Outcome will be reviewed and assigned to a HS course.**
   Evidence of these assigned outcomes will be via course outlines. Some of these outcome skills may be piloted in the assigned courses during the 01-02 year.

Status: Not met; postponed. The program will work on this curriculum development in the summer of 2002. New curriculum will be implemented in the fall.

4. **Beginning in 6/02 several HS instructors will teach and evaluate the Technology skills as part of their instruction.**
   Evidence will be via teacher lesson plans and/or teacher reports, and student completion of courses with integrated technology skills.
   Status: Met. Teachers are including technology checklist in student folders and are checking off the competencies that are already incorporated into some of the course assignments.

5. **By 6/02 staff development will be offered for instructional staff on shared document editing.**
   Evidence will be via staff development agendas and workshop evaluations. Other staff development and workshops as identified by Baldwin Park may be considered.
   Status: Met. A Web-board workshop was offered. Other workshops occurred in project-based instruction, and using digital video. In addition, an editing room was set up for faculty use

6. **By 2/02 a Web-based board will be established for students can post their assignments and develop an online portfolio.**
   Evidence will be actual print outs from the Web site.
   Status: Met. A Web board has been established with several student documents having been posted. Use is still not wide spread. Further use of the Web board and accompanying teacher support are planned as 02-03 goals.

San Diego Community College District
Project Goals for 2001-2002

1. **By 6/02 At least 2 ESL teachers at each of the designated sites (West City, Centre City, ECC, and Lind Vista) will be bringing their class to the lab of a regular weekly basis, with students using software and/or doing activities that include Internet access.**
   Evidence: a) Number of classes using the labs
   b) Teacher initial and final interviews
   Status: Met. At West City, three teachers have been taking their students to the lab once a week for the entire semester. At Centre City two teachers regularly went to the lab. At ECC two lab teachers worked on increasing their skills in working with students. The Cesar Chavez site was substituted for the Linda Vista site, and at Chavez 2 CBET teachers brought their students to the lab on a regular basis.

2. **By 6/02 teachers using the ESL labs with their classes will increase their own computer skills in at least 2 areas.**

   Evidence: Teacher skills self-assessment

   Status: Met based on teacher self-assessment survey. Of the 10 teachers completing the pre and post survey, two improved in only one area, but 8 improved in at least two areas, and three improved in 9 or more areas.

3. **By 6/02 at least 2 teachers will use productivity software to do one classroom project with their students (support by OTAN workshop in advance)**

   Evidence: a) completed projects
   b) Teacher attitude survey
   c) On-site mentor's reports of the mentoring process

   Status: Met. One teacher did a business card development activity and another used Published to work on cards.

4. **By 6/02 the site mentor will develop a process of training teachers to integrate technology into instruction.**

   Evidence: a) written documentation of the process
   b) evidence of class computer activities and projects completed
   c) On-site mentor's reports

   Status: Met. The site mentor carried out extensive training and coaching with 26 teachers.

5. **By 6/02 the site mentor will learn how to use technology with 3 or 4 computers in a classroom of approximately 30 students and will be able to support teachers in this same process.**

   Evidence: a) OTAN mentors observations
   b) Participating teacher's reflections and reports

   Status: Met. On-site mentor reports great skills and learning gains in this area.

Jefferson Adult Division
Project Goals for 2001-2002

1. **By 6/02 the six ESL staff members participating in the program will be exposed to a variety methods of using instructional technology in the classroom Each staff member will select 1 to 2 programs to supplement their teaching ESL students language acquisition and proficiency skills.**

   Data gathering via: a. staff development records relating to which programs reviewed
   b. interviews and/or survey of staff to determine program(s) used

   Status: Met. All teachers brought their classes to the lab once a week beginning in the month of December. Various software programs as well as the Internet have been used.

2. **By 6/02 at least 6 teachers will integrate selected technologies into the delivery of their ESL curriculum. Each teacher will develop at least one goal or project relating to technology use in their classroom (examples: Internet research, writing program, on-line articles, pictures, etc.)**

Data gathering via: a. written teacher goals or projects
b. teacher interviews to determine the extend to which the project was implemented and teacher perceptions about usefulness

Status: Met. Final teacher projects were presented on May 23, 2002.

3. **By 6/02 ESL students participating in the project will show improvement in their basic computer skills.**

Data gathering via: a. teacher ratings of skill improvement for a sample of students
b. student survey of perceived change in skills or confidence with technology

Status: Met. 2 or 3 students from each class were selected and pre-tested using a computer skills assessment instrument developed by the program. Available students were post tested with an average increase of 17%.

4. **By 6/02 Jefferson Adult will further identify and define the role of a site mentor teacher to support staff in the integration of technology.**

Data gathering via: a. informal job description
b. interview with Jefferson staff

Status: Met, goal continuing in progress. The current mentor developed many Internet lessons for the 6 classes coming into the lab. Teacher use of these lessons was mixed. Next year teachers will bring their students to the lab without an assigned lab teacher. This development reflects their increased confidence in using the lab on their own.

Stockton Unified School District Adult Education
Project Goals for 2001-2002

1. **By 6/2002 each teacher involved in the project will present at least one lesson using a computer and projector.**

Data gathering via: a. Submission of lesson plan or classroom observations

Status: Met; 7 out of 8 teachers presented at least one lesson, and one teacher retired. Several teachers did 4 or more lessons.

2. **By 6/2002 teachers involved in the project will become familiar with possibilities of the use of technology in the classroom instruction, and increase their skills in 2 or more areas (examples: PowerPoint, Word, Web-based research, email, etc.).**

   Data gathering via: a. Teacher skills self-assessment

   Status: Met. All teachers improved their skills in PowerPoint and at least one other area.

3. **By 1/2002 each project classroom will be provided with at least one computer for teacher use and one computer for student use**

   Date gathering via: a. Equipment records

   Status: Met

Vista Adult School
Project Goals 2001-2002

1. **To mentor four new teachers**

   Status: Met. Four teachers received mentoring training from the OTAN Mentor.

2. **To produce an activity booklet for adult ESL AlphaSmart use**

   Status: Partially met. A list of activities was developed (see Appendix)

Mt. Diablo Adult Education
Project Goals for 2001-02

1. **By 6/02 a student survey will be developed and administered to all students. This survey will be used to select several students to apply as student technology assistants.**

   Evidence: Job description, survey itself, records of selected applicants

   Status: Met. A flier and survey were developed along with a job description. 4 students applied and were assigned to 4 teachers. The survey will be given to all incoming students beginning in Fall of 2002.

2. **By 6/02, 6 High School Curricula will be revised to include the use of software, productivity tools, and Internet.**

   Evidence: Written curriculum

   Status: Met. Curricula were modified for Algebra, Economics, Physical Science, Technology with Computers, and Government is still in progress.

3. **By 6/02 teachers will be using revised curriculum and students will be using computers more often in the classroom.**

Evidence: Teacher lesson plans.
Status: Met. Teachers used the revised curriculum in Spring semester

4. **Up to 8 teachers will meet individually with the mentor to develop computer skills in areas of weaknesses they have identified.**
   Evidence: Mentor records
   Status: Met. OTAN Mentor met with teachers once a month to give support, training, etc.

5. **By 6/02 teachers will participate in at least two workshops on technology topics**
   Evidence: Workshop registration records
   Status: Met. A workshop was held in December on Computer Troubleshooting and another in April on Search Engines.

Post Project Teacher Interviews: Mt. Diablo and Vista, Jefferson

At the conclusion of each project, teachers from Mt. Diablo and Vista were interviewed by the project coordinator or evaluator to obtain their perceptions of the progress made on objectives as well as their recommendations for future projects. Teacher comments are included in the future planning and recommendations sections.

Other Results

Technology Student Assistants at Mt. Diablo

Mt. Diablo Adult used student assistants in the area of technology to assist teachers and provide individualized attention to students in classes. A model job description was developed for this purpose and is included in the Appendix along with comments from teachers participating in the use of these assistants.

Anecdotal Information, Mentor Observations

Much of the valuable information from the ITAP Project is found in the anecdotal information, written reflection of project mentors, and other informal observations. For example, one e-mail from a teacher to her on-site mentor follows:

> *Hi Donna!*
>
> *I was just thinking of you and going to send you an email re: some of the things we've been doing in the classroom. Did I tell you that we made business cards? Susan's directions didn't work, so used Microsoft Publisher for the business cards. Only hitch the first time I tried this was an aide came into the classroom and printed up about 15 sheets of my business cards with notes for one of her hearing impaired students. I learned a lesson - don't put the business cards into the printer until the last minute. It was rather a costly lesson! However, life goes on. I think using technology in ESL either adds to your flexibility or (at times) can be that extra hair on the camel's back....*

Other mentee reflections and notes can be found in the Appendix.

Spin Off/Auxiliary Information

The project produced other useful products and information, some of which are chronicled here.

1. ESL Software Resource

As a result of interviews with project participants and OTAN's survey of other adult schools, a list of the most popular ESL software programs was developed by Doris Ivy, Educational Technology Librarian. This list has been made available both for project participants and all OTAN clients. The list is being viewed as a fluid list which the field can add to as they identify other valuable programs for adult ESL learners. A complete list of these software programs can be found in Appendix.

2. Writing Checklists and Peer Review Checklists

Vista participating teachers along with OTAN mentor Susan Gaer developed a Writing Checklist which was used as a self-assessment and monitoring tool for students as they developed their writing skills. Used in conjunction with intelligent keyboards, this instrument allowed students to check their own and other students' work in order to improve their writing. In addition, a Peer Review Checklist was developed as a tool for specific student-to-student feedback on writing products.

3. On Site Access to Action Research Data

OTAN staff developed the capability to place project data on-line in the course of the project. By having pre and post test data available to project participants throughout the project, there was a capability to continuously examine project results and make action research types of adjustments as the project proceeded. (www.otan.us/itap/)

4. Hardware Enhancement

Each site acquired new hardware resources during the course of their participation in the project. Mt. Diablo has received a donation of 9 computers from IBM and Vista received AlphaSmart keyboards during the first year of the project. Mt. Diablo also purchased new computer furniture for use in one classroom.

Vista opened a new Adult School Literacy Center with a great deal of technology and also purchased 30 new intelligent keyboards. Stockton added one student computer with Internet to each ESL classroom. Baldwin Park made digital video equipment available to teachers and created an editing lab for their use.

5. Establishment of Website Resource

A Website (http://www.otan.us/itap/) was designed to meet the following needs with regard to the project:

- Inform team members of meeting dates and time lines
- Have access to pertinent documents and research
- Keep members informed with notes on meetings and project progress
- Supplement and enhance email communication

6. Enhanced Teacher Skills in Designing Measurable Objectives

Teachers at each site improved in their ability to write outcome-focused, behavioral objectives for their classroom projects.

SUMMARY OF FINDINGS

Participation

6 sites and 66 teachers participated in the project with 7 different adult education programs being represented. Participant teachers logged a total of 138 workshop appearances. 16 teachers completed classroom projects using technology

Sites	Programs In Project	Number of Teachers	Workshop Appearances	Projects by Teachers
Mt. Diablo, Vista, Baldwin Park, San Diego, Jefferson, Stockton	Adult Secondary, GED, HS Diploma, ABE, ESL, TOEFL, Citizenship	66	138	16

Teacher Skills

Teachers were surveyed on 15 different technology skills before and after the project. Using a Likert Scale from 1 to 4 ratings, participant teachers showed an average of a 24% gain in skills.

Skill	Pre-Skill Average	Post-Skill Average	% Change
Computer Usage	2.47	2.73	11%
Computer Integration into Instruction	2.27	2.77	22%
Software Basics	2.10	2.17	3%
General Troubleshooting	2.27	2.30	1%
File Management	1.93	2.23	16%

Skill	Pre-Skill Average	Post-Skill Average	% Change
Word Processing	2.37	2.53	7%
Graphics	1.67	1.90	14%
Presentation programs, e.g. PowerPoint	1.07	1.73	62%
Creating Web Pages	0.37	0.67	82%
Internet connectivity	2.20	2.30	5%
E-Mail	2.07	2.40	16%
Download files	1.27	1.83	45%
Web browser, e.g. Netscape or IE	1.77	2.17	23%
Ethical Use of the Computer & Software	2.30	2.77	20%
Instructional Software	1.59	2.17	37%
Total			24.3%

Workshops Provided and Evaluations

Workshops were offered on the following subjects as part of the project:

- 5 Ways to Use Technology to Support Classroom Instruction
- PowerPoint Basics for the ESL Classroom
- Designing Internet-Based Activities for ESL Students
- Computer Literacy and Internet Basics
- Educational Software
- Web Authoring: Quia and The Study Place
- Tech Tips & Troubleshooting Computers Integrating Computers into ESL Instruction
- Possibility Faire
- Choosing Instructional Software and Hardware Basics
- Integrating the Internet Into Instruction
- Using Email and Web Pages in Instruction Projects for Success
- Using the Web Board and Online Correcting
- Using Digital Video in the Classroom

Workshop Area	Rating
Objectives Clear	3.72
Activities Helpful	3.56
Well Paced	3.44
Met Needs	3.35

Workshops were generally well received by participants with highest ratings being in the clarity of workshop objectives and helpfulness of activities. Pacing was rated at 3.44 on a 4 point scale and whether the workshop met participant needs was rated at 3.35 cumulatively. Clarity of objectives was 3.72 and helpfulness of activities scored 3.56. It is also noted that early in the project there was more variance in participant workshop ratings. Lower scores were seen in the first year of the project. This increase in workshop rating scores could be due to the more careful assessment of participant needs, tailoring of workshops to the needs assessment data, and the use of specifically site-based workshop designs for year two staff development activities.

Intelligent Keyboard Project

The average CASAS testing gain by students in the four classes using traditional methods was 4.43 as measured by CASAS testing. The average gain for students in the four classes that used portable keyboards was 7.12. This represents a difference of 2.69. Pre and post edited writing samples also showed an increase of 1.2 on a 6 point rubric.

Site Goals and Progress/Implementation

Each site in the project formulated goals at the beginning of their participation. The two continuing sites modified their goals for the second year. Of 36 goals set by the sites involved in the project, 32 were met, 2 were partially met and 2 were unmet.

Number of Goals Set By All Projects	Goals Met	Goals Partially Met	Goals Unmet
36	32	2	2

Teacher Project Attainment

Teachers at several sites undertook projects with their classes to further integrate technology into their classrooms. Of the 28 project goals proposed, 23 were met, 4 partially met and 1 unmet.

Types of Projects	Goals Met	Partially Met	Goals Unmet
Life Science Biology, Job finding, Fine Arts, Non Violent Language, Topical Lessons (US History, Career, Computer, etc.), Resume on Line, ABE Computer Training, Webpage, PowerPoint, E-mail, Create A Book, On Line Lessons, Curriculum Revisions	23	4	1

Teacher Attitudes

Teacher attitudes towards technology were measured on a pre and post test basis on a 10-point scale. Overall attitude towards technology improved by an average of 6.5 percent in 8 different areas of measurement.

Survey Item	Pre-Attitude Survey (avg)	Post-Attitude Survey (avg)	% Change
Using technology in my classroom is not difficult for me.	5.75	6.46	12%
There are many ways to use technology in my teaching.	7.58	7.54	-1%
I am confident in troubleshooting and minor computer repair.	4.25	5.21	23%
Technology can be helpful in classroom record keeping and management.	6.58	7.04	7%
I can foresee projects and situations where technology will help my students learn.	8.33	8.63	4%
Inservices and workshops would be helpful to me in developing my technology skills.	8.92	8.42	-6%
One on one coaching would be helpful to me in developing my technology skills.	9.13	8.75	-4%
I can develop successful lesson plans that include technology.	6.71	7.83	17%
Total			**6.5%**

CONCLUSIONS, LESSONS, RECOMMENDATIONS

Examination of the project data and findings and interviews with project staff yields a number of conclusions, lessons, and exemplary practices

Mentor Lessons

This project demonstrated that mentoring can be an effective method to increase staff skills and infuse technology into a program. The project employed a "dual mentoring system" wherein first an outside mentor worked with on-site staff with the goal of identifying an on-site mentor to be trained and then given responsibility for continuing to work with his or her staff.

1. Mentoring a Key to Implementation

Project sites which made the most progress in integration of technology were those most heavily involved with mentoring practices. Clearly, active mentoring by fellow teachers seems to be a key to increasing technology use in adult education.

2. Individual Mentor Coaching

Some of the most successful mentoring in the project involved individual coaching. The model developed involved discussing goals, experimental trial and error, listening, problem solving, finding resources to support the teacher, and redesigning.

Small group (3-4) coaching also is an effective practice for introduction of new skills and developing on-site mentors. Email contact with mentees between in-person coaching was an excellent way to maintain contact and answer questions.

3. Modeling & Team Teaching

Working with staff in a mentoring role is enhanced if the mentor first models the skills or techniques under consideration and then spends time in some form of team teaching with the mentee. Feedback indicates that actually seeing instructional technology used in the classroom, particularly with one's own class, greatly enhances confidence and skill. Ideas were also shared in the project around the possibility of video taping in-class modeling of skills for use by teachers new to the process.

4. Technology is A Tool; Not a Separate Subject

In order for teachers to take the step from seeing technology as "another thing to do" to incorporating it as a vital part of their teaching, every effort must be made to demonstrate the use of technology as a valuable tool to enhance their achieving further student mastery of the curriculum. When technology is seen as separate or additional task to do, it is often put aside. Orientation and training must focus on this aspect.

5. Start with the Basics

At times the project incorrectly assumed a basic grasp of computer skills on the part of teachers, and presented training that was not correctly targeted to the needs of the audience. Do not assume basic skills are in place without prior assessment.

6. If You Wait For Everyone; You'll Get Nowhere

It's best to start small. If 20-30% of teachers are interested in using technology, start with them. The rest will become interested as they see the results, and as students begin to request more use of technology in their classes.

7. Topical Mentoring & Teacher Projects: Choices

At some schools each teacher chose her/his project individually and consequently they were all working on something different. At other schools all the teachers worked on one topic, such as using PowerPoint in the classroom. The advantage of the first approach is that each teacher is doing what he/she is most interested in.

However, there seems to be a large advantage in having everyone working on the same thing, because all teachers worked together and supported each other.

There also is value in developing and keeping a list of projects completed for future teachers to envision possibilities of what can be done.

8. Mentoring Training Program

There are a definite set of skills and competencies associated with mentoring. It is recommended that a specific mentor orientation and training program be employed at the beginning of any project using mentors. Components of ITAP Mentor Training should include:

- Discussion of the mentoring process
    - Peer coaching
    - Workshops
    - Email support
    - Small groups, etc.
- Use mentor checklist
- Explanation of the evolving technology integration model
- An orientation to their school site

Project Learnings/Exemplary Practices

1. Hardware and Infrastructure Must Support Innovations and Training

Hardware must be in place to support the level of training teachers are receiving. There seems to be a critical "openness period" during and immediately after staff development where teachers are anxious to try their new skills. This is a critical and limited time where lack of availability of equipment or software, or inadequate support and follow up to the training, can cause the teacher to pull back from initial learning and enthusiasm. The level of teacher commitment to the new skills does not last if not capitalized upon soon after initial training.

2. Technology Plan, Including Staff Development

This project pointed to the need for dynamic and flexible technology planning approach. The plan needs to be constantly reviewed and updated. The first stage of in technology plan development, herein termed "preliminary plan," is one in which teacher instructional needs and current site capabilities are examined and an early vision is conceived.

A second stage of the planning process can only truly occur after there is some initial introduction of staff to possibilities and after staff have had some time to experiment and try various options in their classrooms and with their curriculum. Attempting to set one "finished" long range plan prior to teachers having some hands-on experience with technology, and prior to comparing various options with their curricular needs, will likely not lead to a good match between staff needs and program goals. Several universities have published information on a "Concerns Model" of teacher training (Fuller: "Concerns of Teachers, University of Texas). In this model it has been found that in training preservice teachers, it is best if they should are given some field experience first (before theory courses and classroom work) so that they can apply their later learnings to actual experiences they have had in the classroom. The same may be true with technological training.

3. Administrative Involvement and On-Site Mentoring
Key administrators must be present in the pre-planning and in certain implementation phases. Infusion of technology is a complex task and without administrative presence both the visionary and practical support may be lacking in sufficient quantity to sustain the technological efforts. Having a vision is vital, and yet some sites may make the mistake of assuming that a vision is necessarily a specific plan of what hardware or software should be present. The well-defined vision has more to do with seeing and being committed to using technology to enhance student learning. In addition, a key on-site person (often not the principal) must be identified for contact, coordination, and feedback. Shared leadership among teachers, mentor teachers and administrators strengthens the effort. This project identified a model in which training was combined with consultation from off-site mentors, and then with on-site mentoring. All three stages have proven vital.

4. Communication/ Teacher Representation
Having the teachers who will be applying and using the technology involved in the early planning stages, particularly designing and interpreting the needs assessment, reactions to training, etc. is very helpful.

5. Technical Support
Technology support staff must be present in the planning and implementation phases of the project. School sites tend to underestimate the amount of technical support necessary to maintain technology initiatives.

6. Start Small, Go Slowly
The best method of gaining teacher buy-in and actual classroom use of technology is to start with small "doable" projects with a limited number of teachers which can be applied quickly and easily to the classroom. This establishes the technology as applicable and attainable and generally builds confidence among staff. This kind of success breeds further efforts, experimentation, innovation, and integration of curriculum. Opening the training to large numbers from a diverse cross section of staff may inhibit focused and personalized instruction. The ITAP project is coming to envision technology integration as a multiyear process with many stages.

7. Self-Assessment of Skills
The research done in this study seems to indicate that teachers are not accurate in their self-assessment of skills, both under and over-estimating their skill level. This could be

due to the fact that it may be difficult to rate oneself on skills if one is not familiar with the skills and competencies upon which they are evaluating themselves. Again, more of an overview of the skills and what they really entail may be necessary prior to a more accurate self-assessment. Another strategy which may assist self-assessment is the presence of an interviewer who can explain terminology and help to standardize the self-assessment. Written surveys without adequate explanation appear to have limited value.

8. Visualization of Options and Possibilities: An Awareness Stage

Include in any technology planning and implementation a phase where teachers can become familiar with the choices, opportunities and possibilities available. Be sure that if these options are previewed, that teachers have adequate hardware, software, and support to actually attempt to implement any teaching strategies immediately after orientation or training.

9. Staff Development and Learning By "Doing"

Pre-designed workshops often do not meet the specialized needs of participants. Workshops need to be longer that 1 ½ or 2 hours so that there can always be a "hands-on" portion. A viable adjunct or alternative to traditional group workshops was found to be the team teaching method where the mentor provided assistance to teachers in the classroom while they were teaching their class.

This project identified a necessary experimentation stage where staff become familiar with possibilities and have a chance to play with some of the various available programs prior to setting in motion a comprehensive technology use plan. A further lesson from this project is that the agency should not resist or reject this stage in favor of complete plan formulated in advance. Instead, adult education programs should welcome and encourage mechanisms wherein staff would have a hands-on and experimental stage prior to formulating long range technological plans.

Another lesson was that a key to higher workshop evaluations in the second year of the project was the customization of workshops based on assessed staff needs.

10. Staff Development - Multifaceted Approach

Workshops alone do not cause widespread integration of technology into curriculum. A good practice is to combine tailored workshop presentations with on-site mentoring, teacher projects, peer mentoring and other varied approaches.

11. Teacher Projects

Teacher technology projects related to their actual classes are a practical way to have teachers begin to deal with curricular integration issues. Definition of relevant and meaningful standards-related projects is difficult. A format should be developed for teacher projects along with samples of exemplary projects in order to encourage more detail and specificity.

A teacher project form with number of students, specific goals, relationship to standards, and needs for instruction, might be helpful to structure and guide teachers in project design.

12. Unique Classroom Management Needs and Technology

Technology requires changes in the way teachers teach. Another project learning is that classroom management presents unique challenges with the use of technology. For example, the teacher is involved in brief individual and small group tutorials, opportunities for peer assistance are greater, instruction often has to be presented in a more structured manner, students are often distracted by the computer or other technology at the wrong times, there is often a different noise level necessary while students work on computers and discuss their work, etc. It is therefore recommended that a staff development component on classroom management while using technology be further developed.

In year two of the project a list of classroom management techniques was developed (see Appendix).

13. Joint Teacher Student Learning Teams

The traditional model of teachers receiving the inservice training, becoming the "experts", and then going out to use and teach the skills and concepts to students, is a limiting view. Mt. Diablo staff, as a result of their participation in the project, have identified a possible model which includes training teachers and students together in the use and application of technology. This has proven to be a feasible concept since the teacher and student skills in technology are often either about equal or the student may be more knowledgeable in certain areas than the teacher. Also, if students learn technology in addition to the course competencies, they have gained a valuable new skill beyond the goals of the course. Another potential advantage is that when teachers and students learn together, there are strong possibilities for significant building of joint ownership of the class and the activities and learnings involved. Students can become involved in suggesting ways that the technology can be infused, selecting new software, using the Internet, and other technology topics. Students will also come to see themselves as more active participants in their own learning and therefore show more ownership in the outcomes.

14. Dealing With Resistance

As in any new learning or change, resistance is part of the process. Project mentors identified several ideas for dealing with resistance.

- Leave resistors alone, they'll come around eventually
- Don't push, but wait until their students start demanding technology
- Investigate the source of resistance and respond to specifics
- Never force; it typically just causes more resistance
- Listen, respect opinions, find the key to what works for them
- Provide a small and highly successful first experience with technology

- Mentor should be from the field of the mentees. Less resistance is seen when the participants identify with the mentor.

15. Evaluation For Continuous Improvement

Continuous measurement of results and feedback, particularly in the rapidly changing world of technology, is essential. Often neglected, evaluation can be a tool for change.

16. Sequencing of Technology Classroom Integration

The project began to identify one effective sequence of integrating technology into adult education classrooms. This sequencing includes some non-traditional concepts such as: a "learning about possibilities" stage where teachers can be exposed to further resources for their classroom, a "training by doing" orientation of hands-on, in-class assistance, a mid-project reassessment of needs and wants, and a stage for development of the on-site mentor. A possible sequence follows:

1. Initial orientation meeting with teachers and administrators
2. Preliminary skills assessment
3. Site capabilities and resources assessment to determine the level of hardware, maintenance, software, administrative support, time, that the site has available or is willing to make available for technological improvement.
4. Some kind of Possibilities Fair to determine initial interest areas
5. Initial needs and wants assessment including individual interviews
6. Early involvement of teachers in "pilot projects" or other hands-on experimentation with consultation.
7. Training in conjunction with project
8. Mid-project reassessing of teacher needs and project goals
9. Provision of more advanced staff development
10. Provision of mentoring on the site as teachers implement
11. Celebration of results

17. Learning About Teacher Stages of Development

Based on the input and feedback of project participants and project staff, a model (on the following page) is evolving for approaching technology integration in the classroom.

ITAP Technology Integration Model*

Stage	Description	Teacher Use of Technology	Classroom Integration	Approach to Problem Solving	Support Needed (Cumulative)
Pre-Entry	Know little or nothing about computers, may be fearful	None	Not using technology	"I give up" "This is worthless"	1:1 or small group -Demo simple, exciting lessons (like using Word to make a handout) -Integrate computer concepts into this instruction -Listen!
Entry	Initial attempts to use technology	The "me" stage, using the computer to create support materials, handouts, maybe PowerPoint slides	Using technology as a teacher tool only, no integration, no student use	"Help me" -No attempt to fix -Fear of breaking the computer -Call tech support	-Short workshops (e.g. ppt basics) -Pair higher with lower
Acceptance	"OK, I'll do it"	Used as an add-on to instruction, a fun-time activity	-Keyboarding -Drill and practice -Writing	-Basic trouble shooting -Wants to watch what you do and write down each step	-Bring it into the classroom -Modeling, team teaching -Integrate it into the curriculum
Adaptation	Teacher uses technology more often, a regular part of instruction, seamless, a paradigm shift here	-An integral part of instruction -More comfortable with student help	-Technology is integrated into instruction -Students are on task more time -Ss have more pride in work, fewer errors -More collaborative learning	-Tries different things to fix a problem -Not afraid to experiment	-Mentor assists in the classroom, rather than being the model -Collaborative projects with mentor -Barely need a mentor
Invention	-Creative with technology -Teamwork -Mentoring others -Seeks to learn more	-Finds new applications for software -Teaches self new skills -Communicates with a larger arena of peers	-Project-based learning -Constructivism personified	"Show me how you fixed it" (wants to learn) -Comfortable asking students for help -Relies on students -joint problem-solving	Recruit this teacher as a mentor for others

*Adapted from the Apple "Classrooms of Tomorrow" model, http://www.apple.com/education/k12/leadership/acot/

Real change in actual instructional practices, and in student learning, occurs when teachers are in the Invention or perhaps the Adaptation stage (see previous page). Most teachers are in the ITAP project were at the beginning stages so it is logical that until they reach these more advanced two stages, classroom level change will be limited.

PLANNING FOR 2002-2003

Preliminary goal setting meetings have been held at some sites to begin discussion and planning for the coming year. Some of their preliminary plans are outlined below:

Baldwin Park

Possible Goals

1. Purchase technology training videos for individualized student use on certain technology skills areas.
2. Include more electives that either focus on technology skills or have greater technological integration possibilities.
3. Create short instructional videos for students (math, handwriting, etc.)
4. Further integrate use of the Web board into curriculum for particular classes such as English
5. Explore have student Websites
6. Purchase computers for teacher use in enrollment, attendance and assignment records, etc.
7. Incorporate Inspiration Software into courses.
8. Further encouragement of use of new equipment such as scanners, digital camera, etc.
9. Make course outlines and course contracts available to all teachers on CD.
10. Consider individual projects.

Jefferson

1. Teachers will discuss if they would like to continue next year. Will meet in September to set new goals.
2. Will hold a June 25, 2002 workshop on ESL Lessons for the One Computer Classroom

ITAP Year 2 Evaluation Report

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Preliminary Site Technology Survey

Instructional Technology Agency Survey Project
Preliminary Survey

Part I - Administrative Overview

Adult School Name___________________
School District Name__________________
Main Adult School Address____________________________________

____
City State Zip

Adult School Administrator Name ___________________________________
Dr Mr Mrs Ms last first
Email______________ Phone________________ Fax_____________

Date completed ______________

Does adult school have a 5% (innovative use of technology) project? Y N
If yes, please describe ____

____

***Please attach adult school or district technology plan and current adult school catalog and brochures.

Title: Program Overview

Instructions: Please complete for programs under consideration for the instructional technology project. Indicate priority for inclusion at left, 1 – 4, one being highest.

Priority	Program	Approx Annual ADA	#classes	#tchrs F/T	#tchrs P/T	# sites	Tchr Computers	Stdt Comp.	Internet Conn.
	ESL								
	ESL/C'shp								
	ABE/Literacy								
	High School								
	Pre GED/GED								
	Parent Ed								
	Older Adults								
	Other								

Part II - Computer Network Details

Name of person completing survey ______________________________
Title ______________________
Address
Email/Telephone/Fax

How is the adult school connected to the Internet?

- ______ T1 or greater
- ______ Fractional T1
- ______ DSL or Cable
- ______ ISDN
- ______ Dial-up

Is your Internet service filtered? Y N
If yes, is filtering at the district or adult school level? _______________

Does your Internet service go through a firewall? Y N

How is adult school site technical support provided?

______ Outside contract ______ district ______ adult school ______ site

Comments: ________________________

URL of district Web site___________________

URL of adult school Web site___________________

Does adult school staff have school email accounts?

______ Administrators or coordinators ______ F/T teachers ______ P/T teachers

Does the district host web pages?

______ For instructors ______ For classes ______ For students

Part III – Instructional Program Technology Details

Instructions: To be completed by coordinator or supervisor for those programs under consideration to participate in the Instructional Technology Project. Complete one set of forms for each program area under consideration. Duplicate as necessary.

Name of Program:_______

Completed by:__________

Title: _______________

Email ______________ Telephone: _______________ Fax ____________

Site address(es) if different from main adult school address:
1.
2.
3.

COMPUTER CONFIGURATION

	Total computers in lab or classroom	Approx # w/CD-ROM	Approx # w/modem	Approx # w/T1 or faster
Windows 95				
Windows 98				
Power Mac or Older				
MacIntosh G3, G4, iMac				

Other:____

Describe present configuration computers available to instructors and students. Attach pages as neccessary.
Example 1: Lab with 20 I-Macs, high speed Internet connection, used by 10 ABE/ ESL classes on rotation,
lab teacher and tech support available.
Example 2: Five ESL classrooms, each wit 4 computers, PC Compatible, Windows 95, modem connection to Internet

____
____
____

CLASSROOM EQUIPMENT

Indicate type and quantity of equipment available for classroom use in this program:

Alphabetical / 2 columns / space for number beside each item:

____ Audio cassette recorder / player
____ Digital camera
____ Large screen TV
____ Overhead projector
____ Overhead projector panel for computer connection
____ Printer
____ Projector for computer
____ Satellite dish
____ Scanner
____ Television broadcasts
____ Video camera
____ Video editing equipment
____ Video recorder / player
____ Web TV

Program Area: ________________________________

TECHNICAL SKILL LEVEL OF INSTRUCTORS

Consider the technical skill level of the instructors according to the rubric detailed below and identify the approximate numbers that would fall in each level. (During a second phase of planning, a more detailed survey to identify present use of computers in instruction and the skills and needs of instructors will be distributed to coordinators and instructors.)

	Level #1	Level #2	Level #3	Level #4
# F/T Teachers				
# P/T Teachers				

Teacher Computer Skills Self-Assessment

Instructional Technology Agency Intervention Project

Personal Computer Skills Inventory

Name: ______________________ Date: ______________

Agency: ______________________ Site: ______________

Class(es) Taught: ______________________ Years Teaching: ______________

Computer Access at Home? Y N Internet Access at Home? Y N

Directions:

Please complete the following personal computer skills inventory by checking your current level for each of the skills listed. Be honest, but kind to yourself. The survey is designed to help understand your current level of skills and to plan professional development.

Rubrics:

Beginner level reflects general awareness to an ability to perform a very limited set of tasks -- perhaps one or two – that can be used without a basic knowledge of the subject matter.

Novice indicates the basic level of competency necessary to get basic use of the system.

Independent indicates a more advanced level of comfort and understanding of the system; users with Independent level skills should be able to tutor users up to Novice, and should be able to troubleshoot any questions that might arise out of Novice-level usage.

Expert indicates a "Wizard" in the respective area - a user who is able to manage most, if not all, levels of the system; put out fires, run seminars and instruct to large groups, and replace system hardware or software when necessary.

	Beginner	**Novice**	**Independent**	**Expert**
Computer Usage ☐No Experience ☐Beginner ☐Novice ☐Independent ☐Expert	Can use a computer that is turned on with an application running to do specific tasks	Can turn computer on & off safely; launch and quit applications; type, use mouse and interface (windows, menus)	Can connect / disconnect basic components (mouse, keyboard, monitor, printer); perform basic maintenance (e.g. clean mouse)	Can install cards, drivers, perform intermediate maintenance/troubleshooting (e.g. examine cards for secure connections, test components & peripherals
Computer Integration into Instruction ☐No Experience ☐Beginner ☐Novice ☐Independent ☐Expert	Does not use computer-based technologies in the classroom	Learning about programs and strategies to use.	Uses computer-based technology three or four times a semester and encourage students to use it for assignments	Models and teaches students to employ computer-based technologies for communication, problem solving, and data analysis.
Software Basics ☐No Experience ☐Beginner ☐Novice ☐Independent ☐Expert	Can use basic features of standard applications; mouse, menus, cursor, scrollbars	Can install software by following installation prompts	Can use custom installation features, re-install components	Can uninstall and troubleshoot applications
General Troubleshooting ☐No Experience ☐Beginner ☐Novice ☐Independent ☐Expert	Can recognize situations where service is needed and call for help	Can verify computer, monitor & components plugged in (to electricity) and powered on	Can check to verify components (printer, scanner, speakers, etc) properly connected to appropriate computer ports/plugs	Can test drives, media, video, sound; run diagnostic utilities to get additional information
File Management ☐No Experience ☐Beginner ☐Novice ☐Independent ☐Expert	Can open and save files on internal and external disks	Can copy files; can format and backup disks	Can move files, create folders, and duplicate disks.	Can use tools to repair damaged disks, can manage large file systems, can defragment disks.

	Beginner	Novice	Independent	Expert
Word Processing ☐No Experience ☐Beginner ☐Novice ☐Independent ☐Expert	Can type text, make basic corrections to text, use mouse to position cursor, scroll through document	Can use spell checker, save files, print files	Can format text; save in different file formats; import graphics into document, use most formatting	Can automate repetitive tasks (e.g. use macros), transfer data of different types between applications, import other data types (e.g. spreadsheet data into WP doc
Graphics ☐No Experience ☐Beginner ☐Novice ☐Independent ☐Expert	Knows what is meant by "graphics", can distinguish graphics from text as basic data types	Can use paint programs, basic tools; save files; print files	Use basic drawing packages, export graphics to other applications	Can combine paint & drawing, import & export to different file formats (PICT, JPEG, GIF, PNG, etc)
Presentation programs, e.g. Power Point ☐No Experience ☐Beginner ☐Novice ☐Independent ☐Expert	Can give presentations developed by others	Can develop simple text presentations	Can add graphics and use features such as changing backgrounds	Can add animation, video sequences, and other advanced features of program
Creating Web Pages ☐No Experience ☐Beginner ☐Novice ☐Independent ☐Expert	Not at this level	Can use templates or a word processor with "Save as HTML" functionality to create a basic web page	Can use simple HTML and basic Web page authoring tools.	Can use advanced HTML and advanced Web page authoring tools.
Internet connectivity ☐No Experience ☐Beginner ☐Novice ☐Independent ☐Expert	Understands that connections to the Internet must be set up for Internet applications to work	Can sign on and establish connection; can recognize a bad or lost connection and reconnect	Can follow installation prompts to set up service; set modem correctly	Can troubleshoot connection, verify settings.

	Beginner	Novice	Independent	Expert
E-Mail ☐No Experience ☐Beginner ☐Novice ☐Independent ☐Expert	Can send & receive basic email	Can sign up on an electronic list; can describe good list net etiquette	Can forward, quote, import / attach text to message, write offline	Can retrieve and decode specialized attachments.
Download files ☐No Experience ☐Beginner ☐Novice ☐Independent ☐Expert	Not at this level	Can download files from the internet with a web browser; can uncompress files when needed	Can do basic ftp-client download, anonymous login, locate & decompress downloaded files	Can download binary files, upload files, execute manual commands
Web browser, e.g. Netscape or Internet Explorer ☐No Experience ☐Beginner ☐Novice ☐Independent ☐Expert	Can launch a web browser and use hyperlinks and basic navigation	Can enter URLs manually, do basic searches, print pages	Can use & organize bookmarks, download web documents & images for offline use; can download new browser; can do advanced searches	Can find, install and use plug-ins; and manage advanced browser features (cache, cookies, etc)
Ethical Use of the Computer & Software ☐No Experience ☐Beginner ☐Novice ☐Independent ☐Expert	I am not aware of issues surrounding computer software or Internet content	I know that some copyright restrictions apply to software or Internet content	I understand there are acceptable uses of email, software, and Internet content	I model and teach my students the ethical use of all software and copyrighted materials
Instructional Software ☐No Experience ☐Beginner ☐Novice ☐Independent ☐Expert	I have students use one or two software programs as a supplement to instruction.	I have used computer aided instruction on a limited basis in some instructional units.	I routinely plan and deliver instructional units that integrate a variety of software.	Instructional software is an integral part of my courses and I research & implement new programs and techniques.

Initial Teacher Interview

Individual Teacher Interviews

Teacher Name:______________________ Site: _______________
Teaching Times:____________________ Date: ______________

Classes Taught ____

Phone ________________________
E-mail ________________________

1. What have you done with technology in your classroom to date?

2. Do you use any software currently? Which?

3. How would you like to be able to use technology in your instruction or preparation for instruction (dream a little)?

4. Based on the overview of possibilities workshop just given, are there any, which you think you might be interested in using in your teaching?

5. Questions:
a. How would you rate yourself in terms of computer literacy? 1-10 _____

b. In what percentage of your lessons do you estimate you now use technology?
_____%

c. How confident are you with using technology in instruction? Rate yourself on a scale of 1-10, with 10 being the most confident. _____

6. In thinking about classes and workshops to improve your technology skills in instruction, what is the best way you learn new information (e-mail, one to one, classes, etc.)?

Teacher Attitude Survey

ITAP Teacher Technology Survey

NAME: ______________________ School: _____________ Date: _________

Please rate each of the following questions on a scale of 1-10 as honestly as you can.

1. Using technology in my classroom is not difficult for me.

Not True--Very True
1 2 3 4 5 6 7 8 9 10

2. There are many ways to use technology in my teaching.

Not True--Very True
1 2 3 4 5 6 7 8 9 10

3. I am confident in troubleshooting and minor computer repair.

Not True--Very True
1 2 3 4 5 6 7 8 9 10

4. Technology can be helpful in classroom recording keeping and management.

Not True--Very True
1 2 3 4 5 6 7 8 9 10

5. I can foresee projects and situations where technology will help my students learn.

Not True--Very True
1 2 3 4 5 6 7 8 9 10

6. Inservices and workshops would be helpful to me in developing my technology skills.

Not True--Very True
1 2 3 4 5 6 7 8 9 10

7. One on one coaching would be helpful to me in developing my technology skills.

Not True--Very True
1 2 3 4 5 6 7 8 9 10

8. I am concerned that technology in the schools will lead to fewer jobs for teachers.

Not True--Very True
1 2 3 4 5 6 7 8 9 10

9. I can develop successful lesson plans that include technology.

Not True--Very True
1 2 3 4 5 6 7 8 9 10

Teacher Satisfaction Survey

ITAP Individual Teacher Year End Interview

Teacher Name:________________________ **Date:**________________________

School: ____________________________ **Teaching Times:**______________

Classes Taught:______________________ **Phone:**______________________

E-mail:__________________________

1. Please summarize what you have done with technology in your teaching this year.

2. What do you see as your next step in using technology in your teaching?

3. How helpful has the mentoring process been to you?

Not Helpful-- Extremely Helpful

1 2 3 4 5 6 7 8 9 10

How could the mentoring have been improved?

4. How helpful have any workshops that you have taken through this project been to you?

Not Helpful-- Extremely Helpful

1 2 3 4 5 6 7 8 9 10

How could the workshops have been improved?

5. a) How would you rate yourself in terms of computer literacy? 1-10 ____________

(1=poor; 10= very skilled)

b) In what percentage of your lessons do you estimate you now use technology? _______%

c) How confident are you in using technology in your instruction?
Not Confident at All --- -- Very Confident
1 2 3 4 5 6 7 8 9 10

6. Using technology in my classroom is not difficult for me.
Not True--Very true
1 2 3 4 5 6 7 8 9 10

7. There are many ways to use technology in my teaching.
Not True--Very true
1 2 3 4 5 6 7 8 9 10

8. I am confident in troubleshooting and minor computer repair.
Not True--Very true
1 2 3 4 5 6 7 8 9 10

9. Technology can be helpful in classroom record keeping and management.
Not True--Very true
1 2 3 4 5 6 7 8 9 10

10. I can foresee projects and situations where technology will help my students learn.
Not True--Very true
1 2 3 4 5 6 7 8 9 10

11. In services and workshops would be helpful to me in developing my technology skills.
Not True--Very true
1 2 3 4 5 6 7 8 9 10

12. One on one coaching would be helpful to me in developing my technology skills.
Not True--Very true
1 2 3 4 5 6 7 8 9 10

13. I am concerned that technology in the schools will lead to fewer jobs for teachers.
Not True--Very true
1 2 3 4 5 6 7 8 9 10

14. I can develop successful lesson plans that include technology.
Not True--Very true
1 2 3 4 5 6 7 8 9 10

Thank you very much for taking the time to fill this out

Workshop Evaluation Form

Instructional Technology Agency Intervention Project

Workshop Survey

Date: ____ Name: ______________________________

No. years working in Adult Education:_____

Level of computer e xperience:
______ None
______ Beginner
______ Novice
______ Independent
______ Expert

Which program(s) do you work with:
______ ABE
______ Adult Secondary/GED
______ ESL/ESL-Citizenship
______ Other

Position:
_____ Teacher
_____ Teacher Coordinator
_____ Administrator
______ Technology Coordinator
______ Other

Evaluation

	Not at all			*Yes, very*
1. Were the objectives for the workshop clear?	1	2	3	4
2. How helpful were the activities in meeting the objectives?	1	2	3	4
3. Was the workshop well paced?	1	2	3	4
4. How appropriate was the workshop in meeting your needs?	1	2	3	4

5. What could have been done to make the training more effective?
____
____
____

6. How will you apply the skills?
____
____
____

7. What additional support will you need to implement the skills presented during the workshop?
____
____

RECOMMENDATIONS/CONCERNS/REMARKS
* On the reverse side please comment regarding any question rated at "1"

The Technology Peer Coaching Process

by Susan Gaer
Centennial Education Center, Santa Ana College

Step 1 – Recruiting Mentees
Put out a request at the beginning of the semester for people who want to be mentored in the area of using technology in the classroom. Match up mentees with mentors. If this is the first time you're doing this process, maybe you are mentoring each person, so don't include more people than you can manage. At Santa Ana, mentors are paid a $250 stipend, which is a token for how many hours they will actually spend.

Step 2 – Initial Meeting
The mentor meets with mentee. The mentee brings the textbook she is using in her class. They go through the book and decide where they want to integrate their first technological experience. It works best to pick a lesson in the middle of the semester, after the class has settled in and testing has been completed, but still with time to experiment and continue on if they want to.

The mentee picks a unit, and they brainstorm together an activity that they're going to do, for example, low beginning work unit, "describe your job." They brainstorm the language activities they will do around this topic. For writing projects, give the mentee a writing process checklist.

The mentee then develops a model story about herself, and questions for pair practice that will help the students develop the content of their story.

Step 3 – Team Teaching
The mentee and mentor team teach together. If the mentee is having trouble coming up with the story and the questions, the mentor might go in and help teach that lesson too. If she's doing fine, then the mentor wouldn't come until the actual writing process. In the class, the mentor demonstrates how to teach the students to open up Word and type their stories in groups. Sometimes teachers need a lot of help on basic teaching strategies, such as the writing process, in addition to the technology component. Generally, the mentees love having someone come to their room and help them. This stage might mean 2 or 3 classroom visits, depending on the needs of the mentee.

Step 4 – Debriefing
The mentor and mentee get together and talk about what happened in the classroom. Usually the mentee is overwhelmed the first time she tries using computers with her class. She feels like she could never do it alone. The mentor reassures her that she isn't expected to do it alone. That's why the program is providing support.

At this meeting the mentor mainly listens. She asks the following questions:

What did you see?
What did you like?
What do you wish had gone differently?

Step 5 – Practice Meeting
Another meeting is scheduled, and based on what the mentor heard in the debriefing meeting, she gives the mentee some technology training, like how to find a website, or how to insert a picture -- whatever the mentee was having trouble with or not feeling confident about.

Also at this practice meeting, plan what the next technology activity is going to be. For example, if you did drugstore.com when you were talking about health, it might be a similar activity, like realtor.com when you're talking about housing. The idea is to get them to do just a little bit more than they did the first time, but along the same lines.

Step 6 – Team Teaching
Mentor goes into the classroom again, and team teaches with the mentee on the next topic.

Step 7 – Final Debrief
The mentor and mentee go through the same debriefing process as in Step 4. The mentee usually says 'when can you come back again?' Having support is important because so many things can go wrong. It's normal for a first time mentee to go through the process two or three times before she feels confident enough to use the technology on her own, and to then become a mentor for other teachers.

Follow-Up
It often takes three semesters for the teacher to really feel ready to do technology activities independently. After aproximately 3 semesters, the mentee is ready to mentor another teacher.

Classroom Management for Using Technology

by Susan Gaer & Marian Thacher

General Principles

1. When you begin using technology, the classroom goes from teacher-centered to student-centered. Your class might feel chaotic or out of control. This is normal in a technology-enhanced classroom.

2. Students aren't all doing the same thing at the same time. You have to be good at multi-tasking.

3. The noise level might be a lot higher than you're used to. That's OK. Have a signal when the class gets too loud, or when you want their attention, like turning the lights off and on.

4. When you're doing something new that students haven't done before, they need to understand what the process is going to be, what is expected of them, and what they should do if they finish early. In intermediate and above, you can teach the steps as a language lesson before they actually start the activity. In beginning classes you have to actually do the activity with them in a whole group the first time.

5. A KEY to this kind of classroom management is that the students do the management, not the teacher. This means that the teacher doesn't fix all the problems, answer all the questions, and control all the equipment. A student takes pictures. A student helps another to use Word. A student orients new students to the project.

6. This kind of process allows each student to go at her own pace. If it takes her 4 days to type her story, that's fine.

7. After going through this process with the initial activity, the students know their roles, like helping other students, and they will be ready to do this with future activities. AND, students who have been helped then see that helping is expected and they in turn go to help others when they can.

8. Students might not finish whatever activity you're doing, but that's ok. They can finish it the next day, or in the lab, or some other time. They don't mind waiting to finish a project.

9. Students who are assigned to be managers or helpers for slower students will be missing the new lesson, but these are the highest students, and they need less time to master new material. They can take notes while they're helping others, or they will get the notes from another student. When they are helping slower students,

there are times when they aren't doing anything but sitting there being available, so they can listen to the lesson at those times.

Specific Classroom Suggestions

At times you will have several activities going on, and three people from three different groups need your help. Here are some suggestions for organizing your classroom:

a. Have students who are assigned to help those who need help
b. Identify the students who can help with language problems, and those who can help with technology problems
c. Higher level students can help with the language issues
d. You'll probably notice a student who has good technology skills. Use that person. Help them become a good helper for others. Give them some kind of payment (one credit, an eraser, etc.)
e. Assign one or several students to be "new student trainers" who can orient new students as they arrive in an open-entry classroom. These people can also help with troubleshooting.
f. Have a set of rules for computer use on the wall that you can point to when someone gets off track (ideally in all languages of your students)
g. Have an extra activity for the lower students to do while the higher students are doing the activity you've designed. Then the higher students become the mentors to the lower students, and help them complete the activity.
h. If some students are getting unfocused, give them a direction to do something specific, like type their story, help another student, interview a student, or complete a worksheet.
i. If you have tables, not desks, organize the classroom so that each table has certain responsibilities, such as turning on the computers, taking attendance, getting out books, cleaning up, etc. Establish these teams at the beginning of the semester, and have one or two students at each table who are responsible for training new students that come to their table.

Example: Writing Family Stories

The first day

The activity is introduced and everyone is working on it. They read the model story about the teacher, do the pair practice answering questions and interview 5 people. Then write their story, get their picture taken, type it up and insert their picture into their story. Only 2 or 3 will finish this all in one day.
After the first day, there is no more homogeneous group.

The second day

- Some students weren't there the day before, so they're sitting at a table together answering the pair questions to develop the content for their story.
- Some students were really fast the day before, their story is all done, so you have to have something for them to do. They become managers. One student becomes the photographer. He has to figure out who hasn't gotten their picture taken, and

take it. Another will help the #1 group. Another will help those typing. Or they can work on a related paper activity.

- Some students have their story written, but they have to type it on the computer (if not enough computers for all students). They will be working on the
- Some students don't have their picture taken, but they have their story typed.
- Some students have their picture, but haven't written their story.

The third day

- more students will be done, and the teacher can move on with another lesson, and one or two of the managers from the previous day can help those few who are still working on their story.

The fourth day

- only one manager is helping the people who are behind, or who haven't been there before.

ITAP Workshops 2000-2002

YEAR	LOCATION	COURSE DATE	COURSE	FACILITATORS
2	Jefferson	06/26/2002	ESL Activities for the One-Computer Classroom	Marian Thacher
2	Stockton	05/15/2002	Designing Internet-Based Activities for ESL Students	Ruth Luman
2	Mt. Diablo	04/23/2002	Internet Searching with Google	Fernanda Carrera
2	Baldwin Park	04/19/2002	Using Digital Video in the Classroom	John Kerr
2	Baldwin Park	03/22/2002	Using the Web Board and Online Correcting	John Kerr
2	Baldwin Park	03/08/2002	Projects for Success	Sandra Hodge
2	Stockton	02/26/2002	PowerPoint Basics for the ESL Classroom	Ruth Luman
2	San Diego - Mid City Center	02/25/2002	Integrating Computers into ESL Instruction	Susan Gaer
2	Stockton	12/10/2001	5 Ways to Use Technology to Support Classroom Instruction	Ruth Luman and Marian Thacher
2	Mt. Diablo	12/04/2001	Tech Tips and Troubleshooting Computers	Marian Thacher, Fernanda Carrera, Melinda Holt
1	Jefferson	05/23/2001	Email Basics and Web Page Building	Fernanda Carrera and Melinda Holt
1	Jefferson	04/25/2001	Web Authoring: Quia and The Study Place	Fernanda Carrera and Melinda Holt
1	Mt. Diablo	03/29/2001	Web Authoring: Quia and The Study Place	Fernanda Carrera and Melinda Holt
1	So. San Francisco	03/16/2001	Intro to Internet and Integrating the Internet	Fernanda Carrera and Melinda Holt
1	Mt. Diablo	03/12/2001	Educational Software	Doris Ivy and Melinda Holt
1	Mt. Diablo	12/11/2000	Using Email and Web pages in Instruction	Fernanda Carrera and Melinda Holt
1	Mt. Diablo	12/07/2000	Integrating the Internet into Instruction	Fernanda Carrera, Melinda Holt, and Doris Ivy
1	Vista	12/06/2000	Using Email and Web Pages in Instruction	Susan Gaer
1	Vista	11/30/2000	Integrating the Internet into Instruction	Doris Ivy and Linda Swanson
1	Mt. Diablo	11/16/2000	Choosing Instructional Software and Hardware Basics	Doris Ivy and Linda Swanson
1	Vista	11/08/2000	Choosing Instructional	Doris Ivy and Linda

			Software and Hardware Basics	Swanson
1	Mt. Diablo	11/06/2000	Computer Literacy and Internet Basics	Melinda Holt
1	Vista	10/25/2000	Possibility Fair	Susan Gaer

List of ESL Software, 2001

ESL Software Programs Used by California Adult Schools

1. *Oxford Picture Dictionary Interactive* for Beginning and Intermediate students. This interactive, multimedia CD-ROM brings the 3,700 words and illustrations of the print version of The Oxford Picture Dictionary to life with sound and animation. It features an assortment of games, exercises, and activities making it flexible for use in conjunction with the Dictionary or on its own. Thematic content corresponds to secondary and adult curricula, with a strong job-skills strand. It can be used in classrooms, in language labs, or at home, and it can be easily adapted to individual, pair, or small group work. http://www.oup-usa.org/

2. The *Ellis Suite* has three core programs called *Intro, Middle Mastery and Senior Mastery*. Intro is the beginner program and addresses the needs of persons with minimal English ability. It contains 400 hours of interactive instruction and is built around themes that reflect the survival skills necessary for a person who is a new to English-speaker. The program uses a large number of graphics and a built-in Native Language Help/Guide. Middle Mastery and Senior Mastery are the intermediate and advanced programs. Another program, Master Pronunciation, is a practice program for pronunciation skills and accent reduction. There is also a management feature. http://www.ellis.com

3. *Focus on Grammar* is a multilevel interactive program to teach grammar. Sections include: Discover the grammar, practice, reading, listening, and writing. The program includes Immediate interactive feedback to guide the learner, pop-up grammar charts, notes, and appendices for easy reference, and record-keeping functions for keeping track of individual performancehttp://www.longman-elt.com

4. *Rosetta Stone* http://www.rosettastone.com provides multimedia instruction on CD-ROM. The program focuses on the four areas of language learning (Listening Comprehension, Reading, Comprehension,

Speaking with speech recognition, and Writing dictation exercises). These may be done in any order and allows students to use their strengths in order to improve weak areas of language development. The program has a management system.

5. With *Community Explorations*, http//www.edsoft.com students can explore Cornerstone, a community based on American lifestyles. The program introduces the names of people, places, and objects in 52 different locations. By using the mouse to point and click, the user can see and hear the names in English. There is a sentence definition for each word. Sound effects and animation are used in some locations to enhance the meaning. A very minimal management system is included.

6. *Azar Interactive* from Prentice-Hall Regents offers focused grammar exercises, video clips, original audio segments, and a variety of readings that present grammar in context. Azar features 80 Azar Grammar Charts, numerous grammar exercises, and 50 grammar topics from the Azar Grammar Text Series, by Betty Schrampfer Azar. It is appropriate for Beginning through Advanced levels of ESL. http://www.phregents.com/

7. *Mavis Beacon Teaches Typing* helps adult students to learn how to type or improve their typing. The program provides testing to place students in the right lesson for their age group and skill level. From then on, their progress is monitored, and lessons are customized by student's typing strengths, weaknesses, and skill level. http://www.mavisbeacon.com/

8. Microsoft's *Office Suite* provides a word processor, a database, a spreadsheet, and a presentation program. Many ESL teachers make extensive use of a word processor to teach English and keyboarding. Others use the presentation program in Intermediate and Advanced classes to do class presentations. The http://www.microsoft.com/office/

9. *New Dynamic English* by Dyned emphasizes listening as the key skill in language acquisition. The program uses QuickTime video and speech recognition technology, it also provides speaking practice. Each level of New Dynamic English provides 30-50 hours of study and features an online glossary and study guide. The program includes record keeping and automatically adjusts the content based on learner performance. The program has four levels from beginning to advanced. http://www.dyned.com/dyred/eng/home.html

10. *Learn to Speak English* by the Learning Company provides simulated conversations, speech recognition technology, and record/playback capability. The program emphasizes pronunciation, vocabulary, listening, speaking, reading, writing and grammar. Version 8 features Internet

access to ever-changing interactive lessons, online language study groups, and a Personal Tutor to help with specific questions. The program has a record keeping feature. http://www.learningco.com

11. *Road to Citizenship* by Trinity Software is designed to help qualified people become U.S. citizens. The program provides information and a variety of exercises. Road to Citizenship contains both written and spoken English so that students can study by both reading and listening. There is a record keeping feature.

Compiled by Doris Ivy, Educational Technology Librarian Outreach and Technical Assistance Network Sacramento County Office of Education 9738 Lincoln Village Drive Sacramento, CA 95827-3399	(800) 894-3113 CA Only (916) 228-2580 228-2563 fax http://www.otan.us divy@otan.us

Mt. Diablo Student Computer Questionnaire

Student Questionnaire

	Yes	No
Can you turn on the computer ?		
Can you find a program in the list of Programs?		
Can you find a program on the Desktop?		
Can you find WordPad and Paint?		
Can you resize windows and move to different places on the screen?		
Can you minimize, maximize and restore a window?		
Can you format the text in WordPad (bold, Italic, underline and color)?		
Do you know how to insert a diskette in the computer?		
Can you save on the diskette (A:)? Can you save in C:?		
Can you open a document?		
Can you print? Can you preview the document before printing?		
Can you display the toolbars (bars on top of your screen) if they are missing?		
Can you find the taskbar if it's not visible on the screen?		
Do you know what to do if the screen freezes?		
Can you format a diskette?		
Do you know how to turn off the computer correctly?		
What's the first thing you do if the computer doesn't go on?		

Mt. Diablo Student Technology Assistant Flyer

High School Diploma
Student Technology Assistant

Mt. Diablo Adult Education's High School Diploma Program offers this new opportunity for students with computer skills to assist teachers and other students while earning credits.

What is a student Technology Assistant?

- A student Technology Assistant is a student enrolled in the high school diploma program who has been selected to assist instructors and other students with technology-related instruction and curriculum.

What might a student Technology Assistant do?

- Help the teacher research web sites related to specific assignments and subjects.
- Complete and evaluate assignments that may be used as part of a specific course.
- Learn with the instructor how to use a new program.
- Help other students learn to use the computer to complete assignments.
- Complete routine checks, maintenance, or housekeeping related to maintaining class technology.

Will a student earn credit? And if so, how much?

- The student and instructor will develop a plan to address the following:
    1. Subject or subjects for which credit will be earned.
    2. Hours worked and time involved.
    3. Expectations of the work to be completed.
    4. How the student will be evaluated.

How does a student become a Student Technology Assistant?

- Fill out an application and the technology skills form, turn it into Mrs. Scott.
- Selected applicants will be called for an interview.

Will the student be paid for the position?

- No, the position is for high school credit. However, working with an instructor as an assistant looks good on a resume and student *may* be able to get a letter of reference.

Mt. Diablo Adult Education

High School Diploma Program

Student Technology Assistant Application

Date: ____________________________

Name: ____

Telephone Number: ____

Please indicate days and times you are attending classes:

__ Mondays: mornings __ afternoons ___ evenings ___

__ Tuesdays: mornings __ afternoons ___ evenings ___

__ Wednesdays: mornings __ afternoons ___ evenings ___

__ Thursdays: mornings __ afternoons ___ evenings ___

__ Fridays: mornings __ afternoons ___

What is your availability for Student Technology activities:

_____ during class hours indicated above

_____ others times: please specify when: ___________________________________

Please explain briefly why you are interested in becoming a Student Technology Assistant: ____

____

____

____

Please complete the attached check-off sheet.

Student Technology Assistant Report #1

From a Mt. Diablo Instructor

This quarter I had a student assistant for the technology part of one of my classes. He was very helpful and good with the students, answering questions and handling problems that always arise when using the computers. He also put together a 3" ring binder organizing all my materials that I've collected over this year - concerning using technology in the classroom. This was gathered from various meetings, group discussions and conferences. He divided the binder by subject having in the front an introduction.

I would say that besides researching different websites, organizing all my materials he was most helpful with the students. When there is a large class it's almost impossible to sit with each student on the computers and be helpful. Many of the students have no computer knowledge, so helping them can be very time consuming. My student technology assistant was most helpful. I would most certainly like to have one in each class all the time.

Student Technology Assistant Report #2

From a Mt. Diablo Instructor

Student A was a wonderful computer tech for our ABE/GED classroom project for this year of 2002. His help has been invaluable to the students AND to the instructor. Some of his projects were:

He helped monitor all 9 new computers and checked for their content. He recorded what was working on each station and what other programs we might need for our class use.

He helped finalize my ABE/GED Classroom Web page by checking sites and keeping me updated on new ones or ones that were no longer working.

See www.geocities.com/abegedcvp/abeged.html

He willing gave individual help to students, who are learning the technology of computers,

He gleaned information from various web sites for some careers. He was especially interested in the Armed Forces sites. While he was studying for his GED, he made plans to join the Army, enlisted last month, and will be leaving in June for his basic training,

He often demonstrated how to surf the web for those students who were interested.

He was my troubleshooter several times when the computers acted up and I couldn't figure out what was wrong.

Student A was extremely helpful in his tech job for our classroom. I am thinking of telling the Army that they can't have him this June. Our students and I need him with us!! ☺

Baldwin Park Student Technology Outcomes

BPACE ABE / HSS Technology Outcomes
Draft

1. Identify the basic components of a computer
2. Produce a document using a word processor
3. Create a spreadsheet
4. Use a spreadsheet to create a chart/graph
5. Use the Internet as a research tool
6. Use e-mail to send attachments
7. Participate in a web site by posting information
8. Use technology to create a presentation
9. Use a scanner or digital camera to import digital images
10. Create basic desktop publishing documents (cards, newsletters(
11. Obtain information from an automated phone information system (ABE)
12. Send a FAX (ABE)

Jefferson Student Computer Skills Survey

Number indicates a "yes" answer

Questions	Beginning	Intermediate	Advanced
Click Mouse	5	4	7
Open Program	1	3	4
Use keyboard to type any word	7	4	7
Capitalize	2	3	6
Delete	2	4	6
Move insertion point	2	3	5
Recognize the parts of a computer	1	3	5
Spell check	0	0	3
Navigate the internet by clicking links	3	4	5
Use back and forward keys	2	3	3
Cut paste copy text	0	1	2
Save a document	0	0	2
Print preview	0	1	3
Use more than 1 program at a time	0	0	3
Open a program with start menu	0	2	5
Exit program	4	2	3
Restore a program from task bar	1	0	4
Change font properties	0	4	5
Format text	0	1	5
Use a search engine	0	0	1
Use email	2	2	2
Send email with attachment	0	0	2
Insert a url in the window	2	1	3
Resize windows	1	2	4
Modify page setup	0	0	0
PowerPoint	0	0	2
Have PowerPoint	5	3	5
Like PowerPoint	7	3	6
Want PowerPoint	7	4	7
Use PowerPoint	5	3	6

Vista Idea List for Using Keyboards with Beginning ESL

From Sam Olson, Instructor:

There is a "Teacher's Guide" available with AlphaSmarts that has a lot of good ideas. I am forwarding the suggestions that I did receive from Kathy Escondon and Jeanne Schutze:

1. Students can use AlphaSmart for dictation from teacher or cassette tapes.
2. Students can use AlphaSmart to compose simple sentences.
3. Students can also use AlphaSmart for fill-in-the-blank sentences and pull words from a word bank that the teacher would type in each AlphaSmart laptop.
4. Students can also use AlphaSmart for taking spelling tests.
5. Students can learn keyboarding and, at the same time, increase speed and accuracy.
6. Students can use Alpha Smart for conversation by writing letters to family, friends, and classmates.
7. Typing dictation of previously produced vocabulary. The students had orally spelled out the words.
8. Typing questions from board on a previously read dialogue, then typing the answers. I verbally ask individual students to recite their answers to each question. Next, I put the students in pairs and one will ask the other a question and the other student will give the answer.
9. Typing a short story from the board. Previously, the class has orally practiced it, and repeated it as I call individual students to recite.

As for myself, I teach the lowest level, but we still use the AlphaSmarts for all the things that we would usually write. I recite the letters, students type into AlphaSmarts, and we put on board. Same with numbers. It's very simple at my level, but I think what's important is that we use them for everything that a student can do with a pencil and paper.

Mentoring Case Study: San Diego

One Mentee's Experience: A Case Study

Leslie attended one initial workshop was subsequently expressed interesting in getting help in her ESL Level 4/5 classroom which had 3 computers. She met with the on-site mentor along with the OTAN mentor (Donna and Susan) to select a lesson topic, plan classroom activities, and choose a day to teach the lesson. The three met and spent a large portion of the time just trying to get the computers running. The OTAN mentor taught a model lesson in Leslie's class on the topic of health using a model story about bad things happening to write their own group stories and then type them on the computer. Leslie indicated that the initial meeting with the mentors was essential in helping her to visualize the lesson as a whole. The demo lesson was very important with the teacher reporting that once she "saw it, she got it." At that point the teacher began coming up with many ideas on her own about how to use the computer and thereafter used the computer about once every three weeks as part of each life skills unit. For instance when they were shopping, she had students make a comparison chart of grocery prices. In the community module students compiled a list of emergency phone numbers and posted it in their homes. One of the keys for the teacher was coming to understand that she wasn't teaching computers, she was teaching language using the computer. Once she got that, and they helped her with the initial planning, she was on her way.

The ESL Department Chair at San Diego Community College (Cathy Coxey) writes: "Thanks to all of you for making it possible for our teachers and out student to benefit from CET's participation in ITAP. I can't begin to describe the excitement and sense of community that has begun to develop among students and teachers alike as they experiment with ways to use technology to enhance their lessons! "

Elaine Barrett (teacher at San Diego CC): "My students LOVED the computer lesson and want to know if we can spend more time working on the computers. I must be nuts, but think it's a good idea… I have never seen my students be so eager to work together and help each other as they were in the computer world- some switch was turned on. It was amazing- even if a little chaotic. Somehow, I don't seem to mind the chaos."

Julia (Jefferson): "When I started visiting the teachers at Jefferson, I was very worried about Julie. I didn't know how to approach her as far as the mentoring was concerned. I didn't know what kind of a project I could suggest. In fact, I didn't even think she'd be willing to do a project. I was even afraid to ask her if I could make an appointment to talk to her.

I did make an appointment and ask with her to fill out the questionnaire. She told me she knew nothing about computers and was a 'level 0.' She said she wasn't even sure she knew how to turn on the one she had in her classroom. She did agree to see me again. I was so very 'grateful' that I did not want to push my luck and ask her about deciding on a project.

We met three times. By the end of the third meeting I could really see a big change in her attitude. At the beginning she told me she wanted to learn how to use the computer to make flyers and to type up simple handouts for her class. I showed her how to use WordPad., She really liked that and during the lessons she found out she wasn't 'dumb' at all. In fact, she is quite bright and can usually catch on even before I finish my explanation. I pointed that out to her on several occasions.

During the second meeting she told me she like to use songs in her class. She uses the lyrics to teach vocabulary and probably grammar points (although I am not sure about the latter). She also uses songs as a way to teacher American culture. She was looking for the lyrics of "A coat of Many Colors." Of course I was able to find that in a matter of seconds with Goggle. She was very impressed by that and I know that since that time she has found other songs. She has had the lab tech. Download some MIDI files and has gone as far as writing down the instruction on low to listen to the music for Diana Rumney (the ESL coordinator). The students have the lyrics and also listen to the song in the computer.

Although I did suggest a project to her once. I never did pin her down for one due to several reasons. Her computer skills were so low that I had problems suggesting something for her to do; after the first try (she didn't like the project I suggested) I did not want to push my luck by asking her to do a specific project; her relationship with computers was going so well that I did not want to introduce another variable.

Sample Mentored Lesson Plan: San Diego

Leslie's Lesson Plan: Ailments and Symptoms

(Compiled by Marian based on notes and emails from Leslie, Donna and Susan)

Day 1

- Leslie introduces and teaches the symptoms and ailments lesson from New Oxford Picture Dictionary (OPD).

- Prepare flash cards that can then be used in other activities during the week such as concentration, matching exercises, etc. Students will be prepared with the necessary vocabulary when Susan arrives.

- Leslie pre-teaches the expressions used, such as " I came down with..." from the e-mail writing "A Bad Weekend" in the OPD.

Day 2

- Susan introduces the lesson using the e-mail writing "A Bad Weekend," or a model story about herself, with several comprehension questions.

- Students then interview a partner about a time when they were sick. They will ask the following questions:
    - When was it?
    - Where were you?
    - Who were you with?
    - Was it an illness or an injury?
    - If it was an injury, how did it happen?
    - What symptoms did you have?
    - How long did they last?
    - What did you do?/How did you solve the problem?
    - Did your solution work?
    - If it happened again, what would you do?

- Students get into groups of four. Each person reports to the group about his/her partner's experience. Students in the group have an index card to record each group member's name and their illness or injury. At the bottom of the card they will each choose the most interesting story or stories. Then, as a group, they will come to consensus about which story they want to write about.
  (Note from Susan: This was a wonderful idea because some of the

stories were very close to the model and students tended to pick a story that went beyond the model.)

- Groups work together to recreate the best story in writing. Each person in the group is assigned a task: manager, checklist manager, writer, typist. Review the checklist for each role.

- Susan dictates the computer instructions, with students writing the instructions in their notebooks, and one student acting as "secretary" and writing on the whiteboard.

- Groups take turns going to the computer. They have new roles: note manager, screen checker, typist and reader. Review the checklist for each role.

- The first two groups to finish writing will use the computers first (There were two functioning computers in the classroom). As other groups finish their writing, they are given worksheets from the OPD workbook to complete until they have a turn on the computer.

- Note: Only one group finished typing on Day 2.

Day 3

- Donna comes to help Leslie finish the lesson.

- Students do a cloze on the computer instructions

- Review new vocabulary from yesterday

- Students review time clauses and problem grammar that the teachers observed yesterday when they were writing.

- Students do the checklist that goes with the writing assignment; students can't type the paragraphs until the teacher checks the checklist.

- Some students continue writing and finishing checklist. Other students are at the computer typing. Other students are doing a new, related activity. Students who were absent go to the computer to work on OPD software to catch up.

- If all groups are finished, we will use the activity where all #2 students rotate from table to table telling the story from their group. (We can also give the students at the tables questions to ask the rotating students.)

Project Questionnaire

OTAN Project Summary

Teacher's Name: ______________________________

Name of Project: ______________________________

Brief description:

____

____

____

1. **Why did you choose this particular project?**

2. **Can you briefly describe the steps involved in the project?**

3. **What material/website/handouts/textbooks did you use to complete your project?**

4. **How would you rate this project as far as complexity?**

5. **How much time did it involve?**

6. **Is there anything you could have done differently?**

7. **Is there anything the mentor teacher could have done to be more helpful?**

8. **Would you repeat this activity with another class or would you repeat this activity for another class?**

9. **Did this project help you in your teaching?**

10. **How did your students benefit from this project?**

Jefferson Teacher Projects

Level	Computer Literacy for ESL Students
Project	A Geocities web page containing some original online ESL exercises and other relevant links and material.
Method	1. Sign up with Yahoo.com 2. Sign up with the Study Place or Quia 3. Create the exercises using The Study Place or Quia 4. Download the Geocities Page Builder and Start the web page. 5. Link the exercises to the web page. 6. Surf the web and find appropriate material/URLs to include in the page.
URLs/Material	www.yahoo.com www.geocities.com www.quia.com www.thestudyplace.org other URLs of appropriate material
Final Product	A web page hosted by Geocities containing online games and exercises/tests for at least 3 lessons for the "ESL and Computers" class using the Study Place and/or Quia.
Measurable Goals	Printing out her homepage from Geocities and continuing the activities linked from it.

Level	Low Beginning
Project	A Class Book
Method	1. Explain to the class the project orally. Bring in samples of class books. 2. Distribute writing questions. Make sure students do not receive the same questions in the same order. More advanced students can answer more questions. 3. Students will use the questions to write a compositions about themselves. 4. Teacher will correct the compositions and give it back to the students to be re-written. 5. Students will re-write the composition and then type it on a word processing program and print it. 6. Teacher or students will take pictures of other members of the class. 7. Teacher will develop pictures and scan them or paste then onto a page. 8. Teacher will make copies of the pictures and written material, bind everything into a book and distribute it to students
URLs/Material	camera
Final Product	A book containing a photo and story of each student
Measurable Goals	Measured by number of students included in the actual product.

Level	High beginning and Intermediate
Project	This is a writing project which consists of the Jefferson Adult School students finding a pen pals and exchanging email with them
Method	1. Sign up with www.ePals.com 2. Choose a class to correspond with. 3. Contact that teacher. 4. Create accounts for the students using www.ePals.com 5. Take the students to the lab and introduce them to the ePals web site. 6. Have students practice sending email to teacher. Have them practice sending email with just one word ("hi", "Hello" or something similar) 7. Distribute a handout with guidelines on what to write. Explain handout. 8. Have students write a letter in class. 9. Teacher will correct the letters and give them back to the students. 10. Students will go to the lab, log on to epals with their account, type the letter and send it. 11. Wait for reply.
URLs/Material	www.ePals.com
Final Product	Printed correspondence between the Jefferson Adult School students and their pen pals.
Measurable Goals	By June, X number of students will be able to independently send and receive email, with attachments, as demonstrated by emailing at least 2 assignments to the teacher.

Level	Intermediate
Project	The students in this class will write a resume’ and place it online using one of the free websites (www.Caljobs.org or www.bayareahelpwanted.com)
Method	1. 1. Discuss the purpose of a resume and the various parts 2. Have students write a resume’. This will be done by following a template (a from) 3. Have students type the resume’ on WordPad. 4. Have students place the resume’ online.
URLs/Material	www.Caljobs.org Note: www.Caljobs.org requires a SS number www.bayareahelpwanted.com
Final Product	A resume’ on paper and online
Measurable Goals	By June X number of students will have posted their resume online, and responded to at least one job ad online.

Level	ESL Advanced
Project	By June, instructor will present at least [3] lessons using PowerPoint and .... (websites, Quia, Study Place, Hot Potatoes, etc)
Method	1. 1. Become familiar with Power Point 2. Decide what the topic of the three lessons will be 3. Create a simple presentation 4. Create a few exercises using the Study Place or another authoring tool. 5. Search for a few links that relate to the topics. 6. Incorporate the exercises and the links in the presentation. 7. Try the presentation with the students
URLs/Material	Power Point www.quia.com www.thestudyplace.org other URLs of appropriate material
Final Product	A Power Point presentation covering three lessons or three separate PP presentations.
Measurable Goals	The instructor will use these presentations in class and test the students on the material presented.

Sample Lesson Plan: Describing People, 10 Most Wanted

DESCRIBING PEOPLE: The FBI's 10 Most Wanted

By Sally Jacobson, Beginning ESL Instructor, SDCCD

1. **Open Internet Explorer.**
2. www.google.com
3. **fbi +10 most wanted**
4. **Choose #2 on the list.**
5. **Answer questions about at least 4 of the 10 Most Wanted**

Name:	**Name**
How tall is he?	**How tall is he?**
What color is his hair?	**What color is his hair?**
What color are his eyes?	**What color are his eyes?**
What color is his skin? (What's his complexion?)	**What color is his skin? (What's his complexion?)**
How much does he weigh?	**How much does he weigh?**
What's his build?	**What's his build?**
Does he have any scars or marks?	**Does he have any scars or marks?**
Crime?	**Crime?**
How much is the reward?	**How much is the reward?**

Name:	**Name**
How tall is he?	**How tall is he?**
What color is his hair?	**What color is his hair?**
What color are his eyes?	**What color are his eyes?**
What color is his skin? (What's his complexion?)	**What color is his skin? (What's his complexion?)**
How much does he weigh?	**How much does he weigh?**
What's his build?	**What's his build?**
Does he have any scars or marks?	**Does he have any scars or marks?**

Crime?	Crime?
How much is the reward?	How much is the reward?

Name:	Name
How tall is he?	How tall is he?
What color is his hair?	What color is his hair?
What color are his eyes?	What color are his eyes?
What color is his skin? (What's his complexion?)	What color is his skin? (What's his complexion?)
How much does he weigh?	How much does he weigh?
What's his build?	What's his build?
Does he have any scars or marks?	Does he have any scars or marks?
Crime?	Crime?
How much is the reward?	How much is the reward?

Name:	Name
How tall is he?	How tall is he?
What color is his hair?	What color is his hair?
What color are his eyes?	What color are his eyes?
What color is his skin? (What's his complexion?)	What color is his skin? (What's his complexion?)
How much does he weigh?	How much does he weigh?
What's his build?	What's his build?
Does he have any scars or marks?	Does he have any scars or marks?
Crime?	Crime?
How much is the reward?	How much is the reward?

Mt Diablo: Sample Revised Life Science Curriculum

Chapter 1 – Life Science

Student will:

- Write out all vocabulary words at beginning of each section and their meanings.
- Write out in complete sentences the "Reading Checks". Incorporate the question into your answer or write out the question completely.
- Section 1-1 Assessment (all) including Think Critically and Skill Builder. You will use the **internet** to find out more information on disease control, report two different diseases that the Center for Disease Control and Prevention (CDC) has tracked down and identified in the past. Can use Glencoe website (under favorites) or use any "search engine". This should be at least one paragraph on each disease, typed.
- Section 1-2 Assessment (all) including Think Critically and Skill Builder. You will use a calculator in "Using Math"
- National Geographic – Do the Practice Problems (calculator necessary). Additional information is on the Glencoe website (favorites).
- Section 1-3 Assessment (all) including Think Critically and Skill Builder. You will use the **internet** for research on a famous scientist and for word processing to present your information. Find ten facts and use them to write a short biography. Use Glencoe website or any "search engine".
- Chapter 1 Assessment: Using Vocabulary, Checking Concepts, Thinking Critically, Developing Skills. All questions and answers must be written out, complete sentences.
- Reinforcement activities after each section (found in the Glencoe website or under favorites).

Mt Diablo: Sample Chapter Assignment

Chapter 1 – Life Science

Student will:

- Write out all vocabulary words at beginning of each section and their meanings.
- Write out in complete sentences the "Reading Checks". Incorporate the question into your answer or write out the question completely.
- Section 1-1 Assessment (all) including Think Critically and Skill Builder. You will use the **internet** to find out more information on disease control, report two different diseases that the Center for Disease Control and Prevention (CDC) has tracked down and identified in the past. Can use Glencoe website (under favorites) or use any "search engine". This should be at least one paragraph on each disease, typed.
- Section 1-2 Assessment (all) including Think Critically and Skill Builder. You will use a calculator in "Using Math"
- National Geographic – Do the Practice Problems (calculator necessary). Additional information is on the Glencoe website (favorites).
- Section 1-3 Assessment (all) including Think Critically and Skill Builder. You will use the **internet** for research on a famous scientist and for word processing to present your information. Find ten facts and use them to write a short biography. Use Glencoe website or any "search engine".
- Chapter 1 Assessment: Using Vocabulary, Checking Concepts, Thinking Critically, Developing Skills. All questions and answers must be written out, complete sentences.
- Reinforcement activities after each section (found in the Glencoe website or under favorites).

Mt Diablo: Sample Project Assignment

ENDANGERED SPECIES – CAN THEY BE SAVE?

Situation/Problem:

It has been estimated that plants and animals are becoming extinct around the world at the rate of one species each hour. For this project you are to select an endangered species, research why it is in danger of becoming extinct and what is being done to save it. Based upon the information you find, you are to predict its chances for long-term survival. You will present your findings to the class.

Possible Strategies:

1. Review a list of endangered species and decide which animal or plant you would like to research. (You will be able to find lists of endangered species on the **internet).** To narrow your choices, do some preliminary research on several species. Use at least four sites.
2. You will need to be concerned with research, analysis of the facts, drawing conclusions, creating materials to support conclusions and making your presentation.

Special Consideration:

In researching your species concentrate your efforts on questions such as the following:

- Why is it in danger of becoming extinct?
- Where is its habitat?
- Who or what is responsible for it being in danger?
- When have the greatest numbers of the species population been lost?
- What is being done to save the species?
- What is the cost of the preservation efforts?
- Who is involved in trying to save the species?
- What are the chances of the species long-term survival?

Maintain an accurate list of your sources. Use a standard bibliographical format.

After gathering your information, analyze your facts and draw conclusions from it. Include a prediction of the species long-term chances for survival. Be sure to back up your predictions with facts.

Support your conclusions with materials such as graphs, charts and tables. For example, some graphs you may create include:

- Stem-and-leaf plots
- Pictographs
- Bar graphs
- Line graphs
- Circle or pie graphs

Use computers for research as well as to help you create support materials.

Plan your presentation.

To be submitted:

- Internet Sites used. Notes and sources
- Supplementary materials including any graphs, tables and charts
- A paper prepared using the word processing double spaced.

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